

HUMAN LIFE IS THE STATE'S GREATEST ASSET

FLORIDA HEALTH NOTES

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OFFICIAL BULLETIN PUBLISHED QUARTERLY BY THE STATE BOARD OF HEALTH

EDITED BY DR. W. H. COX, STATE HEALTH OFFICER

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No Health Department, State or Local, Can Effectively Prevent or Control Disease Without Knowledge of When, Where and Under What Conditions Cases Are Occurring.—U. S. P. H. S.

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FLORIDA HEALTH NOTES

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There were no issues of the Health Notes for the months of June or July,
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STATE BOARD OF HEALTH OF FLORIDA

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VH420

THE Laboratories of the State Board of Health have been established for the purpose of giving aid to the people of this State, through physicians, by making investigations and reporting findings which may be of assistance in diagnosing diseases. There is no charge for this service. It is performed gratuitously. Physicians and surgeons in need of laboratory service are earnestly urged to make use of the facilities offered by the laboratories of the State Board of Health of Florida.

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THE value of Health Notes may be greatly increased if physicians and nurses will aid in causing it to be placed in the hands of parents to whom such information as it contains may be useful. Copies will be mailed to any address upon request.

Patriotism and Health

IN THIS great war that has caused such an upheaval as to divert the peoples' minds from thinking along normal lines into almost constant thought of the war and its horrors, we may overlook the fact that even the health, as well as the safety of the country may be jeopardized. The people may during these abnormal times fail to protect themselves against communicable diseases. This shortsightedness might prove disastrous, and especially deplorable would this be now, when every one is called upon to keep himself at maximum efficiency, so that each may do his full duty in the winning of the war.

It is almost as essential to use all precautions in keeping the great industrial army at home in good health as it is the great military army at the front and in cantonments. Suppose this indifferent attitude should prevail this summer and an epidemic should assume alarming conditions? The result—a loss of time from labor that would reduce Florida's contributions to the prosecution of the war.

A sick civilian is as heavy a burden to the State at this time, as a sick soldier is to the army. A healthy civilian is the true patriot, because he can render full service to his country during these hazardous times. The protection of one's health is a patriotic duty; therefore it becomes a greater personal responsibility than it ever was before.

The Florida State Board of Health desires to reiterate, with emphasis, the "oft repeated gospel," that prevention is better than cure. It is practically within the ability of every one to prevent communicable disease in his household, or at least to prevent its spread.

There is another feature about the prevention of disease that one may lose sight of and have brought forcibly to one's mind in the event some communicable disease is contracted, and that is the shortage of doctors. This shortage, due to so many physicians being called to the colors, and about which so much has been written lately, is a serious matter, and may become a new danger to the public, and involve new obligations.

To prevent all communicable diseases is desired, but too much to be expected. The Florida State Board of Health is doing its utmost to reduce the morbidity rate of communicable diseases.

WHAT THE STATE OF FLORIDA DOES THROUGH ITS BOARD OF HEALTH

It furnishes literature on the causes and prevention of communicable diseases, written in plain language that can be understood by anyone.

It furnishes diphtheria antitoxin, tetanus antitoxin, smallpox vaccine anti-typhoid vaccine, free.

If an epidemic occurs in any community, it sends an expert to investigate the cause and to recommend means for prevention. If the local authorities are unable to control the situation, it takes charge until the epidemic is controlled.

It furnishes to towns and county boards of health expert advice and assistance at any time without cost.

Its laboratories examines specimens for consumption, typhoid fever, diphtheria, intestinal parasites and malaria, free of cost, upon request of any physician. It also makes Wassermann examinations free.

It gives free treatment, upon examination, for hookworm disease.

If a town, institution, or individual is contemplating the installation of a water or sewer system, it furnishes free the services of an expert engineer to advise as to the best methods and to pass on any proposed plans.

It examines public water supplies, making an inspection when necessary, in addition to the bacteriological examination.

It inspects, upon request, any public or private institution, or any city, town or village, and recommends the things necessary for sanitary improvement.

It sends lecturers to public meetings, whenever possible, to speak on any health question, without charge.

It keeps an accurate, legal record of the two most important events in the life of every citizen—his birth and his death—so that today, or a hundred years from today, that legal record will be available for any of the many purposes for which it may be needed.

It inspects regularly the sources of water furnished by railroads to their passengers for drinking to see that they are of the proper purity.

It inspects the schools of the State so far as its resources will permit, and in many cases makes medical inspection of the school children.

It furnishes the Pasteur treatment for the prevention of hydrophobia to those who would find the charges of private Pasteur Institutes a hardship.

The experts employed by the Board are constantly seeking to find out new truths regarding the prevention of disease, which may be of value to the health of the people of Florida.

It collects reports of all contagious and infectious diseases and stands at all times on guard against epidemic or pestilence.

It seeks, by every means, to guard the people of the State against disease and to increase, through better health, the happiness and prosperity of the citizens.

Typhoid Prevention

By V. H. GWINN, M. D.

Vacation trips are now being planned, and just where to go is probably being carefully considered as well as the expenses. Is the vacationist, while planning these details, giving due thought to his protection from communicable diseases? If he is not, he should receive some advice from his physician or the Health Officer before he leaves for his trip to the mountains or lakes. He should use the best means of guarding against typhoid as it is one of the greatest disease dangers he will encounter.

The vacationist is going to unfamiliar surroundings, where conditions are beyond his control, and of course, he must accept them and take much for granted. He probably will not know the source of the water and food supply. He will not be able to solve the fly problem should he find it to exist. Some of the vacationists may be worried from fear of contracting some disease, and nearly every one knows typhoid is one disease most apt to be contracted, through food or drink.

Typhoid immunization by anti-typhoid vaccination, is one of the most practical ways for protection. This treatment consists of three inoculations with the typhoid vaccine, and is usually administered one week apart. The Florida State Board of Health furnishes this vaccine free to physicians in the State. This is advised as one of the ways of prevention of this disease, and will immunize the individual from two to three years.

In health reports from cantonments, typhoid is exceedingly rare, due to this method of prevention. However, if one is vaccinated before leaving home for one's vacation, there will be very little need to worry about typhoid, during the vacation period at least. This advice about vaccination is not always heeded, no matter how strongly put, therefore, it is not the whole duty of the physician or health officer to the vacationist. Educational means must be emphasized. They should be taught wherein lies the danger of resorts, and should be advised to inquire into the sanitary aspects of the place they intend to visit. They should ascertain the facts as to the sewage disposal, water and food supply. The vacationist should be protected, not only for his own sake, but to prevent him from bringing typhoid back to his home community and thereby endangering the neighbors.

The brilliant results of inoculation against typhoid as shown in the army should be a strong incentive to all who are engaged in the prevention of this disease, to make a far more intensive use of this method of immunization against typhoid than has been made. North Carolina reports show very successful efforts have been made in the last year or so, to bring about the general im-

munization of the public, county by county, and the results in most of the counties are very gratifying.

We may not succeed immediately in getting the entire community immunized but when typhoid appears in a family, the action taken for the protection of the other members of the family should be as promptly taken as it is when smallpox enters the family. The State Board of Health wishes to emphasize the fact that typhoid fever, may be, and often is, spread by personal contact, or association with the sick.

The following history of an unfortunate family is given here as an illustration: In a family consisting of parents and nine children, one son returned with typhoid fever. The result was nine cases of typhoid in that one household—all but the mother and baby. Here is where vaccination against the disease would have played a very important role in prevention.

There are cases of typhoid so atypical, that their recognition as such, is a very difficult matter and they become unusually dangerous to others, because the danger is not suspected. When typhoid occurs in infants or young children, the true nature of the disease is often overlooked. Not long ago typhoid in infants was considered extremely rare. The mortality and morbidity from State health departments still seem to confirm that impression—due probably to error in diagnosis in very young children.

One of the Northern States reports seven hundred and eighty-one deaths from typhoid, which occurred from 1909 to 1917 (seven years). Only nine of these victims were under two years, and only thirty-four were under five years. The reason for this small showing of child decedents in mortality rates, is due largely to the fact that symptoms presented in typhoid in children, are very apt to be so different from those seen in adults, that many of them do not come under medical observation, or the attending physician may very easily overlook, or fail to recognize, the cases as those of typhoid; and the younger the child the more certain are symptoms to depart widely from those seen in adults. This is why it is so important to have a blood test made.

The State Board of Health wants the people to know that a blood test for typhoid is done at the State Laboratory, and typhoid vaccine furnished within the State, for the asking.

A HOOKWORM CATECHISM

Question. What are hookworms?

Answer. They are little white worms about half an inch long which live in the small intestines of human beings.

Q. Do they do any harm there?

A. Yes, they produce hookworm disease. Men, women and children attacked by these worms grow pale, weak and unable to work. The growth of children is stunted and they are made stupid

in their studies. The worms suck people's blood and at the same time poison them.

Q. Do many people have it?

A. Yes, it is very common in the Southern States, and causes much misery and poverty. Often every member of large families has it, and frequently schools are found where from three-fourths to all the pupils have it.

Q. How do they get it?

A. Sometimes by eating raw food containing the newly hatched worms, generally by walking barefoot in dirty soil, and getting what is called "ground-itch."

Q. How do the young worms get in the soil or on food?

A. The full-grown worms can only live in the human bowel and there lay eggs. The eggs can only hatch after they are passed out with the excreta. When this is allowed to spread over damp earth the eggs hatch, and then while too small to be seen by the naked eye, will bore through the skin of anybody coming in contact with them, and finally reach the bowel where they in turn will grow up and produce eggs. Or they may stick to vegetables or fruit left on dirty ground and reach the bowel by being swallowed.

Q. Do the hookworms multiply in the bowel?

A. No, every single hookworm in the bowel was swallowed or has bored through the skin.

Q. Do the hookworms multiply on the ground?

A. No, every young worm on the ground is hatched from an egg passed from the bowel, and will die ungrown unless it finds its way back into a human being. Break this circle and the hookworm disease is stamped out.

Q. How can it be broken?

A. By stopping *soil pollution*. First, build *sanitary privies*, which are tight, and do not let wastes reach the open ground. Second, *don't go barefooted*, but *wear shoes* and avoid contact with damp earth which may have been polluted with excrement. And do not let your fruit and vegetables lie on or be grown in such soil.

Q. Can hookworm disease be cured?

A. It can, easily. But it is better to prevent it.

Q. Is this also easy?

A. Yes, all that is needed is a good *tight privy* in every school, farm and cottage yard. Stop spreading excreta broadcast as is so commonly done in the Southern country. When everybody stops this dangerous habit, hookworm disease will die out. If you don't want hookworm disease, see that the wastes from your own home and school are safely disposed of in a *sanitary privy*, and, while teaching others to do the same, *wear shoes* and keep away from the earth which they may have allowed to become polluted.

DISTRIBUTING STATIONS FOR DIPHTHERIA ANTI- TOXIN AND TYPHOID-BACTERIN

CITY	DISTRIBUTOR
Jacksonville.....	State Board of Health Laboratory
Pensacola.....	State Board of Health Laboratory
Miami.....	State Board of Health Laboratory
Tampa.....	State Board of Health Laboratory
Ocala.....	Anti-Monopoly Drug Company
Wauchula.....	Beeson Brothers
Clearwater.....	Clearwater Pharmacy
Tallahassee.....	Cawthorne Drug Company
Lake City.....	Columbia Pharmacy
DeFuniak Springs.....	DeFuniak Drug Company
Key West.....	Fogarty Drug Company
Inverness.....	Inverness Drug Company
Chipley.....	Mitchell Drug Company
Starke.....	Mitchell Drug Company
Orlando.....	McElroy's Pharmacy
Live Oak.....	Payne's Pharmacy
Apalachicola.....	William Pooser
Okeechobee.....	Park Pharmacy
West Palm Beach.....	Speer's Pharmacy
Fort Pierce.....	Silver Palace
Panama City.....	Sims Drug Company
Gainesville.....	J. S. Bodiford
Fort Myers.....	Pixon & Schultz
Arcadia.....	Arcadia Drug Store
Bradentown.....	Stanfield Drug Company
Kissimmee.....	Corner Drug Store

A SUCCESSFUL HEALTH CONFERENCE

The first conference of Health Officers of Florida was held at the central office of the State Board of Health, Jacksonville, on the 1st, 2nd and 3rd days of August. This conference was an innovation in the way of health conferences in this State, as it was the first of its kind. It was largely attended by City Health Officers throughout the State, by several members of the United States Public Health Service now stationed in this State doing splendid work, and by all the State District Health Officers.

The State Health Officer opened the conference with an inspiring address of welcome, after which an able address was delivered by Edgar Waybright, an attorney of Jacksonville, on "Legal Procedure and Rights in Health Work," which, among other things, showed up clearly the powers and duties of Public Health Officers under the laws of the State Board of Health of Florida.

There were many instructive papers read and discussed at this conference. These papers, with as many of the discussions as possible, will be printed in the next number of Health Notes, which will be a special edition, known as Health Conference Number, to come out in September.

PROGRAM

CONFERENCE OF CITY HEALTH OFFICERS WITH STATE HEALTH OFFICER,
JACKSONVILLE, FLORIDA, AUGUST 1ST, 2ND, 3RD, 1918

AUGUST 1, 1918—9:00 A. M.—12 M.

Address of Welcome.....Dr. W. H. Cox, State Health Officer
Opportunities and Obligations of a City Health Officer.....
.....Dr. W. W. MacDonald, Jacksonville
Legal Procedure and Rights in Health Work.....
.....Mr. Edgar Waybright, South Jacksonville
Discussion opened by.....Dr. H. Baer, Bradentown; Dr. Babcock, Miami

2:00 P. M.—5:00 P. M.

Public Health Reports and Records.....
.....Dr. Stewart G. Thompson, Vital Statistician, State Board of Health
Discussion opened by.....Dr. W. R. Warren, Key West

8:00 P. M.

Anti-Malarial Work as a Health Measure.....
.....Mr. C. N. Harrub, Sanitary Engineer, U. S. Public Health Service
Sanitation at Camp Johnston.....Major J. A. Vogelson, Camp Johnston

AUGUST 2, 1918—8:30 A. M.—11:30 A. M.

Soil Pollution Work.....
.....Mr. George W. Simons, Jr., Sanitary Engineer, State Board of Health
Discussion opened by.....Dr. S. M. Worley, St. Augustine

1:00 P. M.—6:00 P. M.

Field Excursion to Lackawanna—Camp Johnston and Vicinity.

8:00 P. M.

Venereal Disease Problem and Its Relation to Public Health.....
Dr. O. H. Cox, U. S. Public Health Service
 Discussion opened by.....Dr. Kirby Smith, Dr. H. A. Mills, Jacksonville

AUGUST 3, 1918—9:00 A. M.—12 M.

Laboratory: Diagnostic Examinations.....
Dr. B. L. Arms, Chief of Laboratories, State Board of Health
 Water and Milk.....Mr. Horatio N. Parker, Jacksonville
 Discussion opened by...Dr. W. D. Nobles, Pensacola; Dr. Sylvan McElory, Orlando

2:00 P. M.—5:00 P. M.

Public Health Publicity.....Dr. J. F. Wilson, Lakeland
 Discussion opened by.....Dr. W. J. Tanner, St. Petersburg

The four habits that are most responsible for the spread of disease in summer are these:

1. Carelessness in disposing of the wastes from the human body.
2. Carelessness in protecting ourselves against summer insects.
3. Carelessness in our food and drink during summer.
4. Carelessness in handling soiled articles of all sorts.

The average death rate from Typhoid Fever during the summer months—May, June, July, August, September and October—in Florida, is higher than the other months of the year. There were 221 deaths from Typhoid Fever in 1917. Of these 139 occurred in the six months named above. The average was twenty-three plus deaths per month. The average for the other six months was thirteen plus per month. Two hundred and twenty-one deaths means two thousand, two hundred and ten cases of Typhoid in 1917. Count the cost!

Flies spread Typhoid Fever hence more cases in "fly months."

THE REMEDIES:

1. Destroy fly breeding places.
2. Clean up back yards, barns and all other places where filth accumulates.
3. Screen all houses, especially kitchens and dining rooms.
4. Wells should be made sanitary and wherever there is no sewer system, modern, fly-proof privies should be installed.
5. A treatment of Typhoid vaccine immunizes the individual for about three years. Typhoid vaccine will be sent out from the State Laboratory on request.

The State Board of Health realizes that a great many deaths from Typhoid can be, and should be, prevented.

To prevent all deaths from Typhoid is desired, but more than can be expected.

The Board will endeavor to reduce the number of deaths one-half. Will you help?

Co-Operation*

B. L. ARMS, M. D., *Chief Bacteriologist, Florida State Board of Health, Jacksonville, Fla.*

It would seem unnecessary to outline to the members of this Society the scope of the work of the Laboratories of the State Board of Health, but we find occasionally that some phases are not fully understood.

Broadly the function of the laboratory is to examine material from any patient suffering from, or suspected to be suffering from, any disease of a bacterial or parasitic nature dangerous to the health of the public. Particular attention is of course paid to those diseases like diphtheria, typhoid, malaria, hookworm, rabies, syphilis and gonorrhoea. Before going further I wish to say that although a laboratory man, I firmly believe that any laboratory report should be considered as but one part of the clinical examination.

Now to take up some of the reasons why the laboratory report and the clinical picture may not agree.

In diphtheria a positive report may only be obtained when some of the diphtheria bacilli are transferred from the patient to the swab, from that to the media, or in case of a direct examination to the slide. Sometimes even when diphtheria bacilli are planted on blood serum there are other organisms which completely overgrow them and none are found when the culture is examined.

That this occurs quite frequently is borne out by many tests. One series impressed this very firmly on the writer, when in 1909, the staff at the Boston City Laboratory working with swabs taken by Dr. E. H. Place, of the Contagious Department of the Boston City Hospital, from known cases of diphtheria in the early stages of the disease, found many negative cultures. In this work five swabs were taken at one operation, then thoroughly rubbed together but in spite of this care many of the cultures did not show a single diphtheria bacillus.

On the other hand frequently the organisms persist in the nose or throat long after all clinical symptoms of the disease have passed. That these patients are a source of danger in most cases has been frequently shown by animal tests. In the case of carriers who have never shown clinical symptoms and who have not been in contact with a clinical case animal tests have repeatedly shown that in a great percentage of cases these organisms are non-virulent and the carriers of these organisms are not a menace to others. This is also borne out by observation of the carriers of these non-virulent organisms.

* Read at meeting of State Medical Association, Tampa, May, 1918.

At the Boston Laboratory at the opening of the session of the public schools in 1909, we undertook the examination of all the pupils in one ward. Cultures from nose and throat were taken from over 4,000 pupils and teachers and this was repeated the following week. Practically one per cent. of the cultures were positive but not a clinical case could be traced to these carriers nor did one of these carriers develop symptoms.

In the examination of bloods for typhoid frequently a negative report is returned when a positive is expected. It is well known that the reaction rarely occurs until at least eight days after the first symptoms and in quite a percentage of cases it is much later and in some instances it is never obtained.

The writer feels that an incomplete reaction is a pointer of some value and when it persists it shows that the patient's resistance to the infection is low, whereas a sharp, complete reaction established early in the disease is an indication that the defenses of the body are in good working condition. In order that there may be no misunderstanding let me say that I feel that a single incomplete reaction is merely suggestive and the test should be repeated after a few days.

A positive reaction may be caused by typhoid or by the anti-typhoid bacterin. Regarding the length of time the reaction persists after typhoid, it is now quite generally acknowledged that a positive test two years after recovery is very suggestive of a typhoid carrier. After immunization by the use of the bacterins the reaction persists a shorter time and only about one-third of those inoculated give a positive reaction six months after the treatment.

In the examination of bloods for malaria negative findings mean very little and frequently we have bloods sent in, the blanks showing that the patient has been taking quinine in large doses for some time. While the laboratory is ready to examine all bloods, is not a report under such conditions apt to be misleading?

In the examination of feces for intestinal parasites several tests should be made in case of a negative, especially after treatment has been given.

The number of smears examined for gonococci is constantly increasing and it is surely a public health examination. Just a word in regard to these examinations. Many smears are submitted, especially from the female, that are totally unfit for examination as the material does not come from the infected area. The only report possible in these cases is unsatisfactory and giving the reason therefor. The complement fixation test for gonorrhoea is not of value in acute cases.

Although the complement fixation test for syphilis was only taken up at the laboratories in 1916, it is now the test that led all others in 1917, there being 4,003 in the central laboratory as compared with 3,056 for diphtheria, the next highest in point of numbers.

These tests are now being run with two antigens, the cholesterol reinforced fixing the complement at 37 degrees C. for 30 minutes and the alcoholic extract of beef heart fixing the complement at 8 degrees C. for four hours.

The two antigens are used in order that a check may be had on the test but no interpretation of the results can be made in the absence of clinical data, hence the simple finding is reported and the report blank bears a note as to the reliability of the antigens. Reports from a few of the members of this Society show that they consider the results with the alcoholic and acetone insoluble antigens are borne out in most cases by the clinical symptoms.

The laboratories wish to co-operate with you to the fullest extent, and if you will tell us how we may do so more fully we will be glad to follow your suggestions.

Webster's Collegiate Dictionary defines the title of my paper as follows: (1) To act or operate jointly with another or others. (2) To join in co-operation. In other words co-operation means that both parties act together.

Do you co-operate when you send in a specimen and fail to fill out your data blank? We regret to report that most of you when you send in a swab to be examined for diphtheria, fail even to indicate whether it is for diagnosis or release; also there is no statement as to whether it comes from the nose or throat. In the case of bloods for typhoid but few answer the question as to anti-typhoid inoculation and in malarial examinations the great majority ignore the question as to administration of quinine. Frequently we receive bloods for malarial examination, the blood being in a drop and the other slide placed over this while still wet, the result being a seal that has to be torn apart which not only makes a satisfactory examination out of the question but often times impossible.

In sending bloods for complement fixation many times there is so little blood that it is impossible to secure enough serum for the test, and a short time ago we received a slide on which there was a single drop of dried blood with the request that we make a widal, a test for malaria and a Wassermann.

One day's mail last month brought three packages on which we could make no report and probably the senders felt that they got no co-operation from the laboratory, but we will allow you to be the judges as to the responsibility:

Package No. I.—Blood specimen for malaria and typhoid mailed at St. Augustine. Not a word to show who sent it or from whom the specimen was taken.

Package No. II.—Sputum mailed at Key West. No other means of identification.

Package No. III.—Sputum; name of patient on bottle but not even a postmark to show where it came from.

Were we responsible for the failure of the physicians to get reports on these cases?

While it is unusual to have so many of these cases in one day

there is hardly a week but that one or more are received with absolutely no means of knowing by whom they are sent.

Another point I would like to emphasize and that is that the name and address of the patient should always accompany the specimen. All these conditions are reportable and a safeguard that may not be apparent but sometimes records are called for by the physician months and even years after the examination.

We do not report on specimens unless this data is furnished, but when such a specimen is received a letter is written asking for the data and saying that as soon as it is furnished the report will be sent. That this failure is but an oversight in practically each case is borne out by the fact that but one physician has failed to return the blank at once properly filled out.

Last March the State Board of Health began the free distribution of diphtheria antitoxin and now all physicians may obtain this free of charge for any patient, and to aid in its being used early in the disease it is to be found at central points all over the State and each of you should know where the nearest distribution point is located. In addition to diphtheria antitoxin the Board furnishes free vaccine virus to protect from smallpox and typho-bacterin for the prevention of typhoid. It is hoped that these preventive treatments will be used freely and each of us can do a great deal of good if we can make the people see that it is a duty to avoid typhoid and smallpox and that they may be made immune at no cost for the virus or bacteria.

It is the intention of the Board to at once place the typho-bacterin at each of the antitoxin stations.

In sending for biological products please be specific for it is not easy to know just what to send unless we have at least a clue although the sender of the request may know perfectly well what he wants.

To illustrate, the following telegram was received recently: "Please send some tetanus antitoxin by next mail." Of course the sender knew what was wanted but the tetanus antitoxin comes in 1,500 unit packages for immunizing purposes and 5,000 unit packages for treatment, and a case of tetanus requires more than one 5,000 unit package. To be on the safe side both sizes were sent. As the typho-bacterin is commonly called vaccine the following request is rather ambiguous: "I want to vaccinate three cases." In this instance vaccine virus was sent and we trust it was what was desired.

The laboratory is but one branch of the State Board of Health. There is a State law that certain diseases shall be reported. You have all been given a license to practice medicine in this State. Are you all obeying the law in regard to reporting your cases that the State says shall be reported? It is to be hoped that the time will soon come when the answer to this question may be yes, but I regret to say that at present it is not true. Some of you may say there is no need for reporting this or that disease but the fact re-

mains that the law says certain diseases shall be reported, and as law-abiding citizens it is our duty to comply with this law. The State law does not ask that a single disease be reported that is not asked for by the United States Public Health Service and especially with camps in our midst it is our duty to co-operate to the limit with the Federal Government. In order to accomplish the greatest amount of effective work there should be the closest co-operation between the physicians, the city, State and Federal authorities. Let us all work together and make the present a new era in public health activities. If this is done the results will repay many fold any effort on our part by making the State a sanitary model, and it is an aim well worth the most earnest co-operation.

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- 1.—American Journal Public Health, Vol. XX, No. 3, August, 1910.
 - 2.—Journal American Medical Association, Vol. LIV, page 951-954, March 19, 1910.
 - 3.—Wade and McDaniel, Journal American Public Health, Vol. V, No. 2, page 136.
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IMPORTANT NOTICE

All communications regarding water examinations should be addressed to the Engineering Department, State Board of Health, Jacksonville, Fla.

All communications relating to diagnostic laboratory examinations, including requests for containers in which to submit specimens for examination, should be addressed to the State Laboratory, either at Jacksonville, or if nearer, the Branch Laboratories at Tampa, Pensacola or Miami.

Biologics—The Central Laboratory at Jacksonville, is the distributing point for the State for diphtheria and tetanus antitoxin, vaccine virus and typho-bacterin, all of which are furnished free on request. In order to facilitate the distribution of diphtheria antitoxin and typho-bacterin, which are the most generally used, these are placed in stations over the State, and a list of these stations is printed on the last page of this number.

For the other products listed address State Laboratory, Jacksonville.

Anti-meningococcus serum is stocked at the Jacksonville Laboratory only, and is sent out C. O. D. It is in 30 c. c. syringes and the price is \$3.00 per syringe.

When sending for any of the biologics be sure to be specific not only as to the product, but also the quantity desired.

The Florida Tank Privy

BY GEORGE W. SIMONS, JR., *Chief Sanitary Engineer*

The Florida tank privy consists of (1) a two-chambered, rectangular, water-tight concrete or brick tank, (2) a fly and mosquito-proof seat compartment provided with a good self-closing seat cover to exclude insects and, (3) a ventilating flue extending from the seat compartment to the open air above the roof. These three essential component parts are detailed on the accompanying plan. The diagram on the left shows a cross section through the tank and seat compartment; the right diagram is a general view, the tank being indicated by dotted lines. The tight seat compartment and flue vent are also shown. The building to be used may be of any convenient type just so the three above mentioned parts conform to make a fly-proof privy. The house, however, should be constructed of good sound material, well dimensioned with all openings screened.

The two-compartment tank is of the greatest importance in this type of privy and great care must be exercised in its construction to see that the dimensions given are strictly adhered to. Considerable study has been devoted to the required tank capacity, a capacity having been decided upon giving the most efficient results. The accompanying diagrams will clearly show the several dimensions indicated and under no circumstances should these be altered. A change in any one dimension would seriously affect the resulting capacity and eventually interfere with the proper tank action. *Before any work is undertaken the plan must be understood and all dimensions in mind.* Therefore it is necessary first of all to study the diagrams and drawings carefully so as to get each detail in mind.

The tank has two separate chambers, it being divided into two parts by a partition wall. The two chambers are known as *liquefying chambers* Nos. 1 and 2 as designated in the left detail figure on the plan. The liquefying chamber No. 1 is directly under the seat and open to the air while the second liquefying chamber is closed. The left figure shows all dimensions except the tank width which is found on the right figure on the dotted portion. The *inside* dimensions of the tank are as follows:

Liquefying Chamber No. 1.....	4 feet deep, top to floor
	(See left Diagram)
	3 feet long, front to back.
	(See left Diagram)
	4 feet deep wide, side to side.
	(See right Diagram)

Liquefying Chamber No. 2.....4 feet deep, top to floor
 (See left Diagram)
 1 foot 3 inches, front to back.
 (See left Diagram)
 4 feet wide, side to side.
 (See right Diagram)

All walls are four (4) inches thick. Between the two chambers there is a partition wall in which is placed a siphon as shown on the left figure. It is absolutely necessary that the above dimensions be strictly followed in order that the future operation of the privy will be efficient.

The top of the tank should extend about 4 to 6 inches above the surrounding ground surface.

To construct the Florida Tank Privy proceed as follows: A suitable site must be selected first, one that is convenient to the house, yet removed as far as possible from any well or cistern. Dry ground with drainage away from the site is to be preferred, but not absolutely necessary. After the site has been selected and before digging, stake out the size of the hole on the ground, indicating corners with pegs and sides with string. Figure (1) will show the hole dug, also specified dimensions. The hole or excavation must be 4 feet deep, 5 feet 3 inches long and 4 feet 8 inches wide. In digging be sure the side walls are exactly perpendicular, corners square and bottom level.

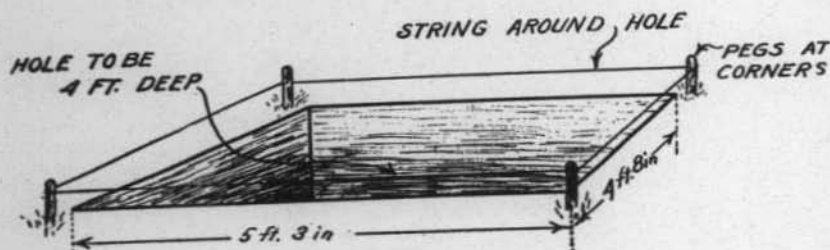


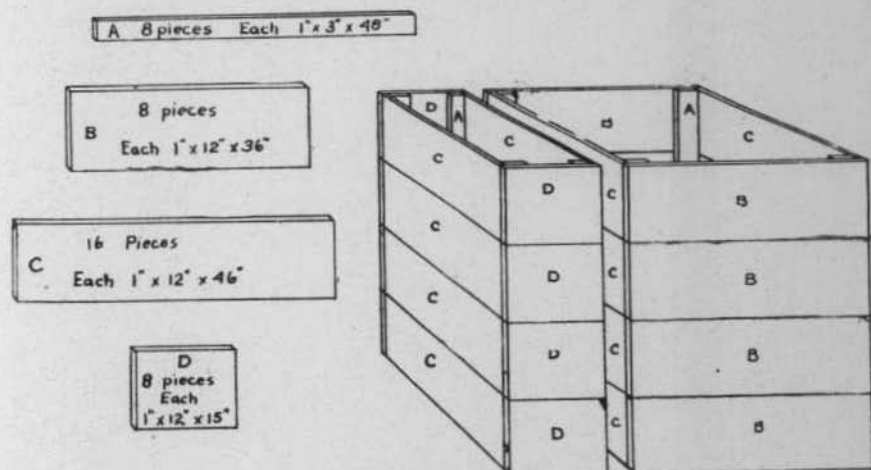
FIG. 1.

After excavation work has been completed the wooden forms should be built and ready to place as soon as the floor has been poured. The detailed making of the wooden forms is clearly shown in Figure (2), so made that when placed in the excavation a space of 4 inches remains between the forms and the earth. To construct the forms required will take eight (8) pieces 1 inch by 12 inches by 12 feet long and four (4) pieces 1 inch by 3 inches by 8 feet long. These pieces are sawed and assembled as shown in detail in Figure (2). After the forms have been used in one place they can easily be transferred to another.

As soon as the forms are completed the bottom of the hole can

be poured with a layer of concrete 4 inches thick. This is the floor of the tank and upon this the wooden forms will be placed to enable pouring the side walls and partition.

Down in the lower left corner of the accompanying plan is detailed the "Amounts of Materials Required." These materials, (sand, cement, rock and water) when mixed make what is termed concrete, that is, a certain amount of Portland cement mixed with specified amounts of sand, rock or gravel and water forms a substance capable of hardening after setting and known as concrete. It will be noticed from the table referred to three different mixtures of concrete are listed—a rich, a medium and light. These three mixtures vary in strength according to the proportionate amounts of ingredients added. For instance, a rich mixture of concrete will require $11\frac{1}{2}$ sacks of cement, 1 cubic yard of sand, $1\frac{1}{4}$ cubic yards of rock or gravel and to give water proofing qualities 90 pounds of hydrated lime to construct the complete tank. This rich mixture is known as a 1:2:3 mixture which means 1 sack of cement, 2 cubic feet of clean sand and 3 cubic feet of rock or gravel. The medium mixture is 1:2:4 and the lights 1:3:6. The materials should be the best; none of the listed proportions should be altered. All sand must be clean, sharp, free from dirt, trash, organic matter and clay. Cement should be of any approved brand. Particles of stone or rock must not be larger than one inch and preferably a little smaller. The medium mixture as listed on the



DETAIL OF WOODEN FORM

FIG. 2

diagram is a safe one to use—the richer the mixture the more expensive the work.

The concrete should be mixed on a suitable sized smooth, plane board about five feet square. To measure out the ingredients properly it is advisable to make a measuring box holding exactly one cubic foot of material. This can be done by making a box having inside dimensions of one foot deep, one foot wide and one foot long as shown in Figure (3). In this way quantities can be more expediently and accurately proportioned as for instance, using the medium mixture, 1:2:4, fill the measuring box with sand twice and with rock four times. To this quantity of rock and sand add one sack of cement and mix thoroughly. Carry on this procedure until the specified amounts of material are consumed the quantities listed in the lower left of the diagram. The quantities shown in the table are the total amounts of each for the construction of one privy. The dry materials must be thoroughly mixed with a shovel before any water is added, after which the water should be added slowly and the entire mixture well stirred and shovelled. A properly soaked batch of concrete should have the consistency of thick

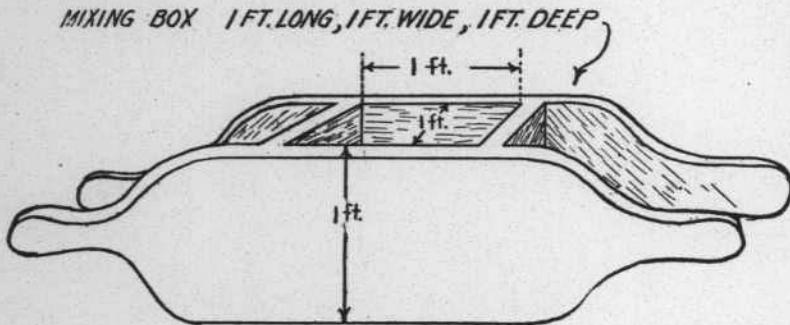


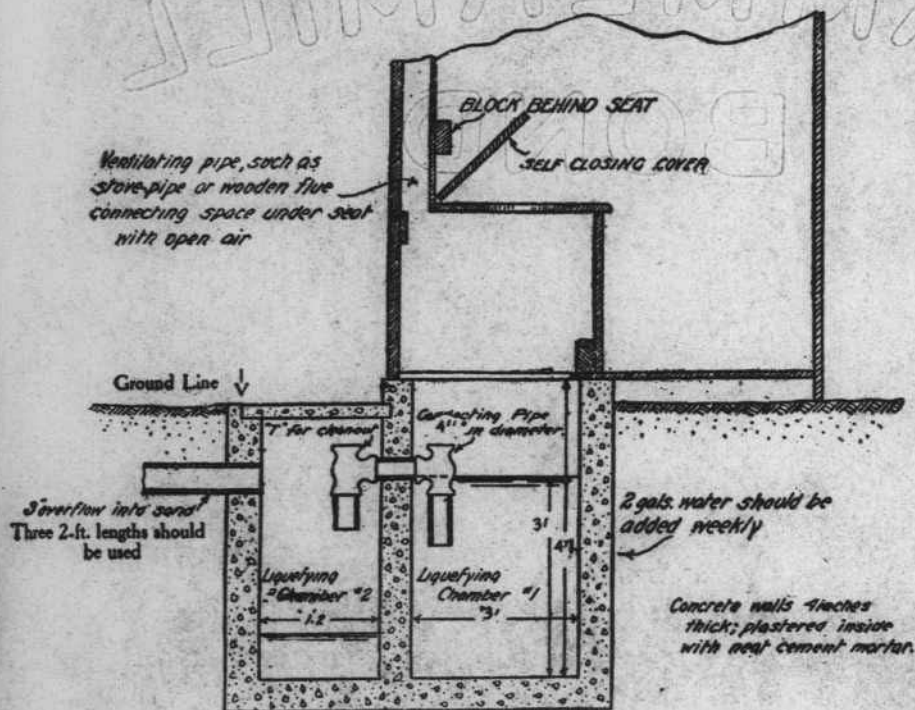
FIG 3

cream and should flow easily into place. Make up batches in small quantities at a time.

After the floor has been poured as detailed previously the wooden forms should be correctly placed in the ground. It will be necessary to build a form of four pieces 4 inches wide around the outside of the hole above the ground to extend the walls of the tank 4 inches higher than the surrounding ground. When the forms are placed the concrete can be poured in the side spaces between the earth and forms, and as poured it must be tamped to get a good set.

When concrete has been poured to a point fourteen inches (14) from the finished tank top the hereinafter described siphon connection must be placed and set with the invert or bottom flow trough

DETAIL PLAN OF TANK PRIVY



NO
This Privy co
ment concrete tank—
plans.
STUDY DRA
COMMENT

For connection pipes
use one 4-inch
one 4-

AMOUNTS OF MATERIALS REQUIRED

Mixture of Cement	Rich	Medium	Light
No. Sacks of Cement	11.50	10.00	7.00
Cubic Yards Sand	1.00	0.75	1.00
Cubic Yards Stone	1.25	1.30	1.50
No. Pounds Hydrated Lime	90	100	112

TH
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GEORGE W. S
CHIEF SANITARY
FLORIDA STATE BO
191

HYDRATED LIME ADDED TO CONCRETE WILL LEND
WATERPROOFED QUALITIES

Ventilating Flue

NOTICE

Privy consists of a two compartment
—dimensions as shown in

DRAWING BEFORE
BEGINNING WORK

pipes between compartments
—inch vitrified "T" and
—inch 4-inch elbow

Portion of building cut away
to show interior

Self closing cover

Concrete box placed in ground

GENERAL VIEW OF TANK PRIVY

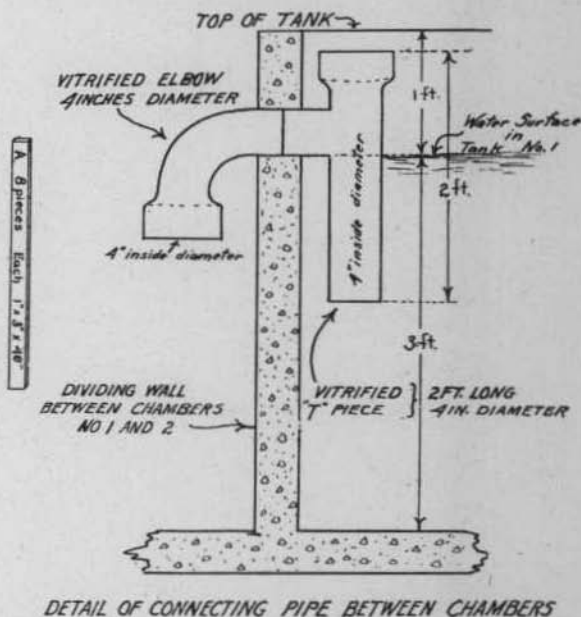
THE TANK PRIVY

DESIGNED BY
W. SIMONS, JR.

MILITARY ENGINEER
BOARD OF HEALTH
1918

just exactly one (1) foot from the finished top. This connection and details are shown in Figure (4). At this point the drain pipe extending from the back wall of liquefying chamber No. 2 should be placed also. Following the placing of these pipes the remainder of the concrete walls should be poured. After the walls have been poured the work must remain about 48 hours (two days) to allow a set.

The two compartments, known technically as Liquefying Chambers 1 and 2, are connected by means of a vitrified "T" and an elbow joint forming a siphon. This connecting siphon should preferably have an inside diameter of 4 inches and is made by procur-



DETAIL OF CONNECTING PIPE BETWEEN CHAMBERS

FIG. 4

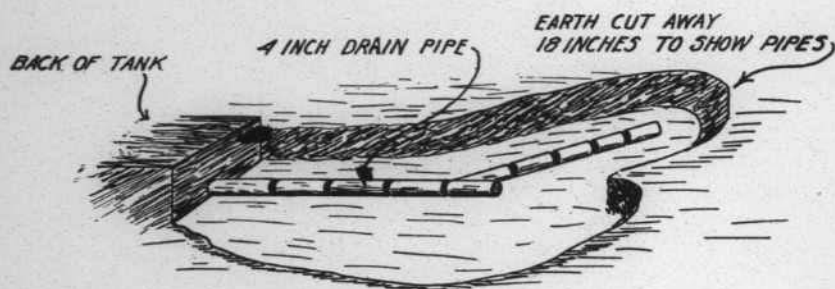
ing an ordinary vitrified "T" twenty-four inches long having a four-inch diameter, and an elbow of like material and dimensions. The short end of the "T" is inserted into the partition wall separating the two chambers; this will allow the long leg of the "T" to extend into the tank and the short end to extend upwards for cleaning purposes. After setting this "T" into the partition wall set the elbow into the short leg of the "T" in the wall, embedding the end firmly into the concrete. This completes the siphon. These two vitrified pieces can be procured at any dealer of building material. Figure (4) shows this connection in detail.

The top of Liquefying Chamber No. 2 must be covered with a concrete slab or wooden plank cover which ever the builder desires to use.

About one foot from the top in the back wall of Liquefying Chamber No. 2 a second opening is provided for a drainage pipe. The final disposal of the sewage is into the surrounding soil layers where the soil bacteria and oxygen is abundant to oxidize and modify the sewage quality. Extending from this there should be at least twenty-five feet of pipe to each privy laid with loose joints as shown in Figure (5).

The seat compartment must be constructed of sound, tongue and grooved material to make it fly and mosquito-proof. It must further be provided with a hinged self-closing seat cover. Either from the back of the seat compartment or from the floor the ventilating flue should extend, which should be at least four inches square, inside dimensions.

To operate the Florida Tank Privy the Liquefying Chamber No. 1, directly under the seat is filled with water to the point where



SUB-SURFACE DRAIN, 4 INCH TILE WITH LOOSE JOINTS

FIG. 5.

it begins to trickle into the second chamber. This requires three feet of water in the tank if foregoing construction advice is strictly followed. No more water should be added at first. Following the addition of water throw into the first chamber two shovelful of well rotted stable manure to start the tank action or fermentation. A film of oil should furthermore be poured on the surface of the water in the chambers as an insect repellent. The privy tank is then ready for use. *Only a good grade of thin toilet tissue* should be used since any other kind of paper will be difficult for the tank to digest and dispose of. It is advisable to replenish or add water to the first chamber frequently—at least weekly and preferably a little daily. If odor results it is because the above instructions have not been faithfully adhered to. The State Board of Health provides free of charge stiff cards detailing instructions, these cards to be posted in every tank privy. Disinfectants and deodorants must never be thrown into the tank privy.

This type of privy is to be preferred to others because, (1) it is fly-proof as regards access to excreta, (2) fecal matter and other organic matter is liquefied or hydrolized, (3) privy cleaning is eliminated, (4) it is simple of construction and operation.

The effluent or liquid flowing into the soil layers from the second chamber amounts to less than one-half the volume deposited in the first compartment. The effluent is liquid and does not possess a repulsive odor.

The question often arises as to what takes place within the tank. U. S. Public Health Bulletin No. 68, says as follow about the action in the tank:

"If human excreta are permitted to undergo natural fermentation, the solid matter becomes liquefied and a considerable proportion of the excrement and urine is carried away by evaporation and gas formation.

"The fecal matter ferments in the water and gradually liquefies. The level of the liquid is raised and the excess flows into liquefying chamber No. 2, where it is protected from insects by the cover and a film of oil. This effluent may be allowed to collect in the tank until it reaches the level of the connecting pipe, when it may be safely disposed of in any one of several ways."

The Florida Tank Privy as designed and detailed in this article can be used satisfactorily at the smaller rural schools in the State—schools attended by not more than thirty-five pupils. It can also be used by depots, churches and other places not having water works facilities. However, at such places two separate privies should always be provided for the use of the sexes, and where necessary provisions made for colored people. In schools or institutions where the number of users will probably exceed thirty-five a larger and possibly a double type tank should be constructed.

Bureau of Vital Statistics

BY STEWART G. THOMPSON, D. P. H., *Statistician*

NUMBER OF CASES AND DEATH REPORTED APRIL, MAY AND JUNE, 1918

COUNTIES	Typhoid		Malaria		Smallpox		Measles		Scarlet Fever		Whooping Cough	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
State Total.....	134	94	168	63	17	.....	399	47	15	1	289	57
Alachua			1	2			1					1
Baker												
Bay			3	2				3				
Bradford		2	2				4					
Brevard				1				1				
Broward				1						1		
Calhoun				3							1	
Citrus			17				6				23	2
Clay			3	3							2	
Columbia	1	1		1								
Dade	2	3					6				2	2
DeSoto	1	4		1			18	1				
Duval	57	12	42	6	5		190	2	9		212	4
Escambia	10	18		3	2		49	6				3
Flagler												
Franklin	4		6				2	1		1	4	
Gadsden	1	1	9	1	3		3	2			1	
Hamilton		1	1					9				3
Hernando	2		4		1		1				1	
Hillsborough		5	8	3			14				2	5
Holmes	2	1		2				1				
Jackson		1		1				1				1
Jefferson		2						2				2
Lafayette	4	2	3				5	5			3	
Lake							9				11	
Lee							1				2	
Leon		1		2								6
Levy	3	1	11	2			6				1	1
Liberty		3		1			1		1			
Madison		1		4			7	1				1
Manatee				2							1	
Marion	9	7	17	2	1		5	1			6	2
Monroe	6	1	2	2					1			3
Nassau	1	1	2									2
Okaloosa		1					2	1				
Okeechobee				1			6	2				
Orange	1	3			2		1				1	1
Osceola	1		1	2								2
Palm Beach	2			1			1					1
Pasco												
Pinellas		1		1			20	1	3		4	3
Polk	11	6	5	1			8	2				2
Putnam	2	2	2	1	1		5				3	
St. Johns		3	1		1			1				1
St. Lucie							3					
Santa Rosa	2			1								
Seminole				2								1
Sumter		2	3	3	1		1				2	1
Suwannee	2	2	1	1			14	3				2
Taylor		1	12	4								
Volusia	2	2					7		1			
Wakulla				1								3
Walton	4	2						1				
Washington	4	1	12				3				3	

Other Cases Reported: Paratyphoid, 5; Typhus, 0; Asiatic Cholera, 0; Bubonic Plague, 0; Yellow Fever, 0; Leprosy, 2; German Measles, 35; Chickenpox, 59; Dengue, 0; Glanders, 0; Anthrax, 0; Rabies, 0; Tetanus, 2; Favus, 0; Beriberi, 0; Cancer, 3; Epidemic

NUMBER OF CASES AND DEATHS REPORTED APRIL, MAY AND JUNE, 1918—(Continued)

Diphtheria		Dysentery		Mumps		Pellagra		Tuberculosis		Syphilis		Gonococcus Infection		Hookworm	
Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
37	6	159	120	274	.....	25	57	122	252	298	39	334	1	16	2
.....	1	4	4	.....	.....	1	1	1	4	3	.....	1	.....	.....	.....
.....	1	4	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....
.....	4	.....	.....	.....	.....	.....	.....	3	2	.....	1	.....	.....	.....
.....	6	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
.....	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	1	1	.....	1	.....	1	.....	1	1	1	.....	.....	.....	.....	.....
.....	3	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	1	2	1	.....	.....	.....	.....	.....
.....	4	8	.....	.....	.....	2	2	13	1	1	1	.....	1	.....
.....	1	.....	3	.....	.....	.....	.....	6	6	.....	.....	1	.....	.....	.....
8	1	49	6	233	.....	12	6	85	56	264	12	302	1	13	.....
.....	6	.....	.....	.....	6	2	7	1	1	4	.....	.....	.....
.....	3	1	.....	.....	3	.....	2	2	.....	.....	.....	.....	.....	.....
5	1	.....	2	5	.....	.....	10	.....	15	.....	8	1	.....	.....	1
.....	10	3	.....	.....	.....	.....	1	4	2	.....	1	.....	.....	.....
.....	1	2	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....
7	2	8	8	.....	.....	4	11	28	10	1	12	.....	.....	.....
.....
.....	4	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	2	.....	.....	.....	2	.....	4	.....	1	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....
.....	12	3	.....	.....	.....	1	.....	3	.....	2	1	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....
.....	2	.....	.....	1	.....	2	3	1	.....	.....	.....	.....	.....
.....	2	.....	1	.....	1	.....	.....	.....	.....
1	22	7	.....	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....
.....	3	1	.....	.....	1	2	2	1	2	1	.....	.....	.....
8	1	6	3	7	.....	1	1	.....	6	.....	.....	.....	.....	1	.....
.....	1	2	.....	.....	.....	1	10	.....	2	.....	.....	.....	.....
.....	1	.....	.....	.....	1	1	4	.....	.....	.....	.....	.....	.....
1	5	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....
.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	2	.....	1	.....	1	.....	1	4	1	.....	.....	.....	.....	.....
2	1	.....	.....	2	2	.....	.....	.....	.....	.....
.....	2	.....	.....	.....	.....	.....	3	.....	1	.....	.....	.....	.....
1	1	4	1	.....	1	1	.....	8	2	1	.....	.....	.....	.....
.....	3	2	.....	.....	.....	1	.....	4	.....	.....	2	.....	.....	.....
.....	4	2	.....	.....	.....	1	1	10	1	1	1	.....	.....	.....
.....	2	.....	1	.....	.....	1	.....	.....	.....
.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	4	.....	.....	1	2	1	2	.....	.....	.....	.....	.....	1
.....	3	1	.....	.....	.....	1	4	1	.....	1	.....	.....	.....
1	3	3	1	.....	1	.....	.....	1	1	.....	1	.....	.....	.....
.....	1	2	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....
.....	12	7	1	.....	.....	3	4	8	1	.....	2	.....	.....	.....
.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	1	.....	3	.....	.....	.....	.....	.....
.....	1	3	.....	1	1	.....	1	.....	.....	.....	.....	1	.....

Meningitis, 8; Acute Poliomyelitis, 5; Trachoma, 6; Ophthalmia Neonatorum, 4; Pneumonia, 124; Trichinosis, 0.

The foregoing table gives evidence that the physicians in this State are not making morbidity reports as required by law. On November 1, 1917, every physician was supplied with morbidity cards and instructions relative to making morbidity reports. If you are a practising physician in this State, and for any reason did not receive a supply of cards, make it known to this Bureau at once and you will receive them by return mail.

The prompt reporting of notifiable diseases is very important and one of the duties of law abiding physicians. Failure to report is nothing short of criminal and it is hoped the physicians in this State will get into line and make reports of all notifiable diseases coming under their observation. The responsibility for enforcing this law has been placed on the Bureau of Vital Statistics and we hope you will not embarrass us by making it necessary to go to the courts in order to receive morbidity reports.

Every effort is being made to eliminate all possible detail work for the physician so that reports may be made with the least possible expenditure of time and expense. In return the Bureau solicits the co-operation and support of the physicians and others who are responsible for making reports.

The following named diseases and disabilities are hereby declared to be dangerous to the public health and made notifiable, and the occurrence of cases shall be reported:

GROUP 1—COMMUNICABLE DISEASES

Anthrax	Mumps
Chicken-pox	Opthalmia Neonatorum (conjunctivitis of new-born infants)
Cholera, Asiatic (also cholera nostras when Asiatic Cholera is present or its importation threatened)	Paratyphoid Fever
Dengue	Plague
Diphtheria	Pneumonia (Acute)
Dysentery:	Poliomyelitis (Acute Infectious)
(a) Amoebic	Rabies
(b) Bacillary	Scarlet Fever
Favus	Smallpox
German Measles	Syphilis
Glanders	Tetanus
Gonococcus	Trachoma
Hookworm Disease	Trichinosis
Leprosy	Tuberculosis (all forms, the organ or part affected in each case to be stated)
Malaria	Typhoid Fever
Measles	Typhus Fever
Meningitis:	Whooping Cough
(a) Epidemic Cerebrospinal	Yellow Fever
(b) Tuberculosis	

GROUP 2—MISCELLANEOUS DISEASES

Beriberi

Cancer

Pellagra

BIRTH REGISTRATION

We've registered our incomes,
Just as the law demands;
We've registered our autos,
Our houses and our lands;
We've registered our motor boats,
At Uncle Samuel's call—
Then why not register the most
Important thing of all?

We've registered our incomes,
Our horses and our mules;
We've listed all our property
According to the rules;
We've counted all our country's wealth,
Our cattle, wheat and corn—
But no one knows how many
Future citizens are born.

Now since we've inventoried
'Most everything on earth,
Why don't we take some notice
Of a Human Being's birth?
And while we count each side of beef
And every ton of coal,
Why don't we count that priceless thing,
A new born Human Soul?

—N. C. W. A.

THE BABY'S PLEA

"Fine feathers make fine birds," they say. We babies—just the other way—know youngsters dressed in fancy clothes, all frills and lace and furbelows, whose mothers rig them up like toys, don't make the strongest girls and boys.

"Clothes make the man." It's also true that clothing makes the baby, too. So listen to the baby's plea and dress him as he wants to be.

Few, simple garments, warm and light, soft, dry and clean and never tight, cut in one piece and without bands, fashioned by mother's loving hands, no bunchy wrinkles 'round the waist, exactly suit a baby's taste.

For our one object, you must know, is just to kick and stretch and grow. In the cold days of snow and storm, of course we must be snug and warm; but how would you, do you suppose, like heavy, bulky, bunchy clothes, that overload you, truss and bind you, till 'neath the mass 'tis hard to find you?

When August weather is at hand, a diaper and knitted band are all the rage in Babyland; for baby—and I'm sure he's right—likes such a costume, cool and light, better than any "Frenchy" gown bought at the smartest shop in town.

"Fine feathers make fine birds?" Well, maybe! But then, a bird is not a baby!

—N. C. W. A.

HUMAN LIFE IS THE STATE'S GREATEST ASSET

10 '18

FLORIDA HEALTH NOTES



OFFICIAL BULLETIN

PUBLISHED QUARTERLY BY THE

STATE BOARD OF HEALTH

EDITED BY DR. W. H. COX, STATE HEALTH

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Vol. XIII TAMPA, FLORIDA, SEPTEMBER, 1918 No. 2 (New Series)

Health Conference Number

"No sanitary improvement worth the name will be effective whatever acts you pass or whatever powers you confer on public officers unless you create an intelligent interest in the public mind."

FLORIDA HEALTH NOTES

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THE Laboratories of the State Board of Health have been established for the purpose of giving aid to the people of this State, through physicians, by making investigations and reporting findings which may be of assistance in diagnosing diseases. There is no charge for this service. It is performed gratuitously. Physicians and surgeons in need of laboratory service are earnestly urged to make use of the facilities offered by the laboratories of the State Board of Health of Florida.

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THE value of Health Notes may be greatly increased if physicians and nurses will aid in causing it to be placed in the hands of parents to whom such information as it contains may be useful. Copies will be mailed to any address upon request.

THE HEALTH OFFICER AND THE BIG FIGHT

IT IS said to take nine men working "over here" to keep one soldier fighting "over there." Clearly, therefore, it is wise to keep the nine workers husky and working as well as the one soldier.

Which health officer should stay at home and who should go to war? How is the nation bearing up under the war-strain? What are the special war-time health menaces of the civil population, and what are we going to do about them? What headway are we making against the venereal diseases? These are the questions to be considered at the convention of United States and Canadian sanitarians at Chicago, October 14-17, to be held under the auspices of the American Public Health Association. Some of the military sanitarians who will address the meetings are Surgeon General Gorgas, Colonel Victor C. Vaughan, and Major William H. Welch of the Army Medical Corps. Other speakers at the general sessions will be George H. Vincent, president of the Rockefeller Foundation; Dr. Charles J. Hastings, president of the American Public Health Association; Dr. W. A. Evans, Assistant Surgeon General; Allan J. McLaughlin, U. S. P. H. S.; Dr. Ernest S. Bishop, Dr. Lee K. Frankel, Dr. Frederick L. Hoffman and others.

There will also be papers upon laboratory, industrial hygiene, vital statistics, food and drugs, sanitary engineering, sociological and general health administration subjects.

As the health of the civil population has a direct bearing upon the winning of the war, mayors and governors are being requested to send their health officers to the conference in spite of the present high cost of government.

Foreword

THIS Health Conference was called by the State Health Officer and was held at the State Board of Health building, Jacksonville, August 1, 2 and 3. Dr. Cox, State Health Officer, delivered the address of welcome. Edgar Waybright, an attorney of Jacksonville, read a paper on "Legal Procedure and Rights in Health Work." Dr. W. W. MacDonnell, City Health Officer of Jacksonville, read a paper on "Opportunities and Obligations of a City Health Officer," and Dr. H. N. Parker, of Jacksonville, read a paper on "Water and Milk."

The above papers are not in this issue of Health Notes. The meeting was an interesting one and enjoyed by all present.

The following papers were read and the discussions were not as limited as it appears:

Malaria Control Work as a Health Measure

By C. N. HARRUB, *Sanitary Engineer, United States Public Health Service.*

In determining the value of Malaria Control Work, it is necessary that we consider the subject from at least two points of view. Malaria is not only a health problem, but is also an economic problem of considerable magnitude, which deserves attention aside from its its health relations.

It is a natural characteristic of human kind to become indifferent to matters of every day occurrence, of whatever nature they may be. In this way malaria had come to be looked upon with very little consideration, and even the medical profession and health authorities could give practically no definite information as to its prevalence or virulence in what are known as the malarial districts of the country, when The United States Public Health Service sought to gather information along these lines. In 1909 this Service sent letters to the State Departments of Health of those States in which malaria was supposed to be most prevalent, asking for information concerning the distribution of the disease in the various States, but there were no statistics from which to get the information.

The appearance of a few cases of typhoid fever or smallpox in a community immediately sets in motion the machinery of the health department, and measures to prevent the spread of the disease are instituted at once, while malaria is disregarded and allowed to spread at will. In the work of The United States Public Health Service communities have been found in which from 50 to 75 per cent. of the population suffered from malaria, and yet no active control measures were in use, and furthermore it was only after an extensive educational campaign had been conducted that the authorities could be induced to institute preventative measures.

For several years past The Public Health Service has been making efforts to obtain information concerning the prevalence and geographic distribution of malaria in the various States. This work was started in Florida in 1913. The method employed is circularization of the practicing physicians. From April, 1915, to December, 1916, about 7,000 inquiry cards were sent to physicians in this State, and though replies were received from less than one in seven of these inquiries, nearly 7,500 cases of malaria were reported. In view of the small percentage of replies received it is safe to assume that the actual number of cases occurring in the State was considerably in excess of the above figure. In fact, it

(Read before the convention of City Health Officers of the State of Florida, at Jacksonville, Fla., August 1, 2 and 3, 1918).

was shown by von Ezdorf that in the twelve Southern States, (Alabama, Arkansas, Georgia, Florida, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and the eastern part of Texas, having a total population of 25,000,000 people) at least 4 per cent. of the population suffer an attack of malarial fever each year. In other words 1,000,000 people in the above mentioned States are attacked by malaria each year. Assuming that the cases are in proportion to the population, this would mean an annual incidence in Florida of about 41,000 cases. Allowing an average of one week during which the person sick with malaria is incapacitated for work, we have a total annual loss of time of 41,000 weeks on account of malaria alone. Assuming an average weekly wage of \$12.00, which was approximately the average wage of the country previous to the present high scale of wages caused by the war conditions, and this means an annual loss in wages of practically half a million dollars. This is for the State of Florida alone. For the twelve States mentioned above the monetary loss would be \$12,000,000 annually, not to mention the additional expense of medical attendance and care of the patients. In addition to the actual loss of time from labor, the more indeterminate factor of reduced efficiency of the malarial person before being obliged to give up completely, must also be taken into consideration.

In localities where malaria abounds there is always the possibility of large numbers of people becoming infected, many of them every year for long periods of time. Under such conditions adults frequently acquire an immunity, but only at the expense of suffering repeated attacks of the disease during earlier life, when the effects on the physical and mental development are of a serious nature. The presence of the malarial parasite in the blood reduces the vitality of the host. Energy which should be used in building up physical and mental strength is expended in resisting the disease and overcoming its effects. The final result, even though immunity is acquired, is an individual whose efficiency is below normal, as a workman, parent and citizen.

A striking illustration of the economic importance of malaria is given by von Ezdorf in his report of malaria control work at Roanoke Rapids, N. C. The town is a mill town and had at that time a population of about 4,100 people. "The mills employed a health officer to render medical service to the employees and their families. He reported that during the summer of 1910, 75 per cent. of the people had suffered from malaria, and that the prevalence in 1911, 1912 and 1913 was as great. On account of the prevalence of the disease many families were moving away and others were coming to take their places. It was estimated that 50 per cent. of the population was in a way transient. The mills were operating short handed much of the time during these years. Visits on malarial patients alone during the summer of 1913 averaged fifty per day.

(Von Ezdorf, R. H. Demonstrations of Malaria Control, P. H. Reports, March 10, 1916, p. 614-629).

At times there were three, four and even seven members of a family suffering with malaria at the same time."

Malaria control measures were instituted and one year later, 1914, the number of visits of the health officer had dropped to one per day, and the amount of infection as indicated by blood examinations had fallen off 67.7 per cent. The malaria rate had continuously decreased all through the months when it was usually at its worst. During 1914 the mills had always had an abundance of help.

During the succeeding year, 1915, conditions continued to improve, and the output of the mills was very materially increased. At that time the treasurer of one of these mills wrote:

"I will frankly admit that I could not realize what a great change could be brought about by systematic work and comparatively little expense. The money spent in anti-malaria work here has paid the quickest and most enormous dividends I have ever seen from any investment, and after having had our experience I would, if necessary, do the work over again if I knew it would cost ten times the amount. * * * * Our experience has taught us that the eradication of mosquitoes is not only the proper thing to do from a strictly health standpoint, but it is an exceedingly profitable thing to do."

The manager of another of the mills stated that the improved regularity and efficiency of the employes had been such that the amount, \$1,000, which the mill had contributed to the malaria control fund, had been more than repaid in one month's operation. Similar results have been obtained by the United States Public Health Service at Electric Mills, Miss., Cedars, Miss., Crystal City, Mo., and various places in Virginia, Arkansas and Texas.

At Crossett, Ark., in the first eight months the malarial index was reduced 77.7 per cent., and the calls for malaria were reduced 70 per cent. This was accomplished at a cost of approximately 10 cents per capita per month. In October of last year the Crossett Lumber Company wrote as follows:

"While much might be said in favor of the campaign that has been conducted, there are a few results that deserve special emphasis, purely from the standpoint of labor efficiency.

"Living conditions have been much more attractive, purely from the standpoint of comfort resulting in a certain kind of contentment that would not have been possible otherwise.

"Comparing conditions with former years. Our payroll and hospital records show a large number of employes who were idle on account of sickness, principally due to malaria, whereas during the past twelve months there has been practically no shortage of labor from this same cause. Our industry, as well as others, has suffered from scarcity of labor on account of army volunteering and furnishing quota due to the draft; hence if in addition to these demands upon our men we were further handicapped by the usual amount of sickness as was the rule in former years, our produc-

tion would have been decreased at this time at least 33 per cent. We have been maintaining a thorough anti-mosquito campaign during the year for less than \$1,000, and no other investment that we have made will bring us as large returns."

Electric Mills, Miss., in two years showed a reduction of 91 per cent. parasite index; Cedars, Miss., showed 76.5 per cent.; Crystal City, Mo., showed 83.6 per cent., and so on.

Health boards are created for the purpose of safeguarding the people, and securing them against unnecessary exposure to disease. They are charged with the duty of preventing the preventable diseases, and conditions which produce disease. Malaria is a preventable disease, and because it is preventable and because it affects so many people it should receive the serious attention of Health Officers and Health Boards in all endemic localities. In all such localities measures should be instituted to reduce the prevalence of the disease.

The mortality rate of malaria is not high, and this is no doubt the reason why it has not received more serious consideration. The general effect of malaria is to leave the victim weakened and less resistant to other forms of disease, and though it may not be the direct cause of many deaths, it may in this way have a decided influence on the length of life. In endemic localities malaria is a very important factor in determining the average length of life.

Obviously the line of procedure to follow in endeavoring to reduce the malaria incidence is to break the line of transmission from patient to well person. As it is definitely known that malaria is transmitted only through the agency of the *Anopheles* mosquitoes, this is the logical point of attack. No mosquitoes, no malaria. Hence the elimination of malaria reduces itself to a question of eradication of the mosquito. This is best accomplished by making it impossible for them to breed. The first three stages of the life of a mosquito, viz: the egg, the larva and the pupa, are spent in water, and without water it is impossible for them to propagate. The problem thus becomes one of getting rid of all water possible or rendering it unfit for mosquito breeding. This may be accomplished in one of four different ways, but in practice it may be found necessary to employ all of these methods on the same piece of work. The four methods are:

1. Drainage.
2. Oiling.
3. Fish control.
4. Larvacides.

DRAINAGE

Drainage as an anti-malaria measure may be subdivided into several heads.

1. Training natural streams and water courses.
2. Construction of open ditches.

3. Lining ditches.
4. Subsurface drains.
5. Filling.
6. Maintenance.

TRAINING STREAMS

As mosquitoes breed in running water as well as in stagnant pools, it is necessary as a control measure to put them into such condition that the development can be arrested before adult mosquito is produced. This consists in clearing the channels of all obstructions, straightening the course where possible, and regrading the beds so as to confine the water to as narrow an area as possible, and to give the stream an increased current. Difficulty is sometimes encountered in this work, especially in low flat ground such as obtains in many sections of Florida. The stream banks should be clean-cut and all obstructions removed to minimize the chances for floatage to collect, and also to provide an edge which minnows may approach. On streams which dry out soon after storms, depressions in which water may pool and produce mosquitoes should be filled so that the water will drain off.

CONSTRUCTION OF OPEN DITCHES

Open ditches should be as straight as possible, and should have clean-cut slipping edges, and narrow bottoms. They should also be as few as possible. In digging such a system of ditches the main ditch should be dug first, and then such laterals as are indicated. In joining a lateral to the main ditch it should be given a down stream direction to prevent the deposition of silt and sand at the junction.

LINING DITCHES

In some cases where the maintenance of open ditches is too expensive it is found advantageous to line them, or portions of them with concrete. It is not always necessary to line them for their full depth, but just the bottom and a small distance up the sides. Lined ditches are much more easily cleaned than open ones. Care must be taken in their construction to provide sufficient anchorage so that the lining will not be washed out.

SUBSURFACE DRAINAGE

Tile pipe is used in subsurface drainage, and the object is to lower the water table, so that storm water will be more rapidly absorbed by the ground. It is also used to intercept seepage from hillsides.

FILLING

Where the collection of water cannot be economically drained, filling must be resorted to. If the area to be filled is too large it may be partially filled so that the reduced water area may be controlled more easily. As a rule draining is more satisfactory and cheaper than filling.

MAINTENANCE

Under maintenance comes any measures necessary to keep the ditches in their most efficient condition, such as removal of collections of debris, regrading, etc. Vegetation will grow up in the ditches, and must be removed. In ditches which always contain water aquatic growths and algae often have to be combatted. In such cases copper sulphate will be found very useful. Ditches should be inspected at frequent intervals to see that they are free from obstructions and records should be kept of such inspections. These should show the work performed and the materials used, so that costs may be figured. It is well to have a map of the area with the locations of all ditches shown on it.

OILING

Oiling may be used as a supplementary control measure when funds for proper drainage are not available, or until drainage work can be done. The object of oiling is to kill the larvae before they can develop into mosquitoes, and also to render the water disagreeable to the mosquitoes so they will not deposit their eggs in it. The principal requisite for an oil in mosquito control work is that it shall spread well so as to form a thin film over the surface of the water. There are many kinds of oil which are effective in this work, ranging in density from kerosene to crude oil. Kerosene has been used quite extensively, and has some advantages over some of the other grades. It forms a thin film, spreads rapidly, and is easily obtained. Its chief objection is that it evaporates rather quickly. To overcome this feature it may be mixed with a heavier oil. The general practice today is to mix it with crude or some other heavy oil, the mixture being so proportioned that it works well in the sprayers and readily spreads to form the film on the surface of the water. The percentage of kerosene in the mixture varies considerably and may be as high as 75 or 80 per cent. The film is more permanent with such a mixture than with kerosene alone.

Oil may be applied successfully to pools, ditches, streams and edges of ponds and rivers. It should also be used in such containers as fire barrels and similar storage places. In ponds or streams of large size it is unnecessary and useless to endeavor to cover the entire area, because the larvae are seldom found in the deep water and because a film of large dimensions will be easily broken up by wind action and driven all to one side.

Wherever oil is used care should be taken to see that all debris, such as floatage, weeds, etc., are cleared out. The efficiency of the oil film depends entirely on its continuity and if grasses or weeds and sticks are left penetrating the water surface, they not only interfere with the spreading of the film, but the film will not come in contact with them at the water surface. A small annular space is left around each grass or stick and here the larvae may come to breathe. An excessive amount of oil will sometimes overcome this difficulty, but this method is too expensive for general practice.

METHODS OF APPLICATION

Oil may be applied in any of a number of ways, for example:

1. By means of a common garden sprinkling pot.
2. Knapsack sprayer.
3. Drip cans.
4. Small bundle of oil soaked cotton waste.
5. Sprayer from a boat.
6. Thrown from a small dipper.

This last method is only a makeshift, is wasteful of oil, and should never be considered as a permanent method of distribution.

(1). The field of usefulness of the sprinkling pot is limited to small areas, where all parts of the propagation area are easily accessible.

(2). The knapsack sprayer is best for general use. It increases the range over which the oil may be spread, by the operator being able to cover a radius of twenty feet, if desired. The can holds five gallons, and is carried on the back of the operator, thus leaving both hands free while not operating the sprayer. This is a great advantage when traveling over rough ground.

(3). Drip cans are used on small streams. The can is placed about three or four feet above the water level so that the force of the fall will break up the drop of oil and immediately spread it out in the required film. The rate of dripping depends on the size of the stream and its velocity. In a small stream a foot or so in width ten to twenty drops per minute will usually suffice. On larger streams as many as sixty drops per minute may be required. This is a matter which should be determined by trial. Whenever possible it is best to place the drip can so that the oil falls on a rather swift part of the stream such as a small rapids. This aids in breaking up the drop, which then spreads out over the quieter water below.

Various kinds of drip cans are used, different kinds of oil requiring different methods of handling.

(4). The oil-soaked cotton waste is a sort of modification of the drip can, and is used on streams where the flow is too small to require the use of a drip can. The waste is dipped in the oil and then squeezed just enough to stop the dripping. It is then fastened by wire in the bed of the stream at its headwaters. The oil gradually works out and forms the required film. It will serve for about a week and must then be re-dipped.

(5). Hand pumps and sprayers are used in small flat bottomed boats to spray the edges of streams, lagoons, etc., where drainage cannot be economically employed.

FISH CONTROL

In certain localities malaria control work is very materially assisted by fish. The top feeding minnow, *Gambusia Affinis*, is the deadly enemy of the mosquito larvae, and in localities where they

abound are the means of destroying large numbers of the wigglers. If given a little assistance they will often entirely prevent the development of mosquitoes in a pool. In order to make them most efficient it is necessary to keep clean smooth edges on the pool or stream and to remove all floatage in which the wigglers may hide. Small pools may be stocked with these minnows and oiling thereby rendered unnecessary. Such pools should be inspected frequently in order to be sure that the fish control is effective.

LARVACIDES

Under certain conditions larvacides may be used in malaria control work, but as a rule they are less satisfactory and more expensive than draining or oiling. Larvacides are poisonous and should therefore be used with care and discretion. They may kill fish and other aquatic life if applied too freely, and by thus destroying the top feeding minnows destroy one of the best natural agents in mosquito control that we have. Larvacides may be used to best advantage in such containers as fire barrels, where they can not injure stock, or kill forms of life other than those for which it is intended. One feature in favor of some larvacides is the fact that one application is sufficient for a whole season, or until the water is changed. Such a one is nitre cake.

The Government, through the War Department and The Public Health Service, is at present giving a very forcible illustration of what may be accomplished by malaria control work. Protective measures have been carried out along the lines described above at all the military cantonments situated in malarial localities. Thousands of dollars have been spent on the work with the result that the malaria rate among the troops has been negligible.

PROPHYLAXIS AND SCREENING

In addition to the above mentioned methods of control, which are designed to eliminate the mosquito, prophylaxis and screening may in certain cases be used to advantage. In prophylactic work quinine is used. The dose varies with the object in view, a larger dose being used to produce immunity than to simply ward off the disease. It has been used very effectively in Italy among the rural population. For the ten years preceding 1902 the average annual death rate was above 14,000. At that time quinine prophylaxis was started, with the result that in ten years the rate had been reduced to a little over 3,000, or about 25 per cent. of the former figure. As no other means of control were employed during this time quinine must be given the credit for this reduction. It has also been used with equally good results in Greece, Algeria, Brazil, Formosa and German East Africa.

Screening of houses should be done in all malarial localities but cannot be considered by itself as an efficient method of control.

SUMMARY

In summarizing we may say that:

1. Malaria is an economic as well as a health problem.
2. In the future more serious consideration and attention should be given to malaria and its control by health authorities in endemic localities.
3. Sufficient work has been done to show that malaria can be controlled.
4. Demonstrations have shown that we may obtain as a result of malaria control work a more efficient class of people as laborers, parents and citizens, and that they will be more contented.
5. Malaria control work returns big dividends in cash.
6. Proper drainage and control by oil is the best method of handling the problem.
7. Prophylaxis and screening are also valuable where drainage is impracticable.
8. Malaria control work offers an opportunity for Health Boards and Health Officers in endemic localities to render a great service to their communities, and each and every one should feel their responsibility, and see that proper records of prevalence and distribution of malaria are kept, and exert their influence to institute anti-malaria measures in their district.

This is especially important at this time when the labor problem is such a serious one, and when any measures for increasing and maintaining a high degree of efficiency are not only a local benefit, but may well be considered a national service.

Soil Pollution Work

BY GEORGE W. SIMONS, JR., *Chief Sanitary Engineer,
State Board of Health*

During the year 1917 there were 4,900 specimens of feces examined in the State laboratories, 1,200 showing positive for hookworm or approximately 30 per cent. In the summer of the same year specimens of feces were collected from Florida National Guard troops stationed at Black Point and it was shown upon examination that 43 per cent. were hookworm infected. Last winter these same men, because of lowered vital resistance occasioned largely by early hookworm infection, suffered seriously from an epidemic of measles and pneumonia at Camp Wheeler, resulting in many fatalities. At a conference of the International Health Board held in Birmingham during March, 1918, several statements were made by Southern Health authorities indicating that troops from other Southern States encountered similar epidemics elsewhere. During the year 1917 there were approximately 2,300 cases of typhoid fever in Florida, resulting in 221 deaths, also 230 deaths from dysentery with its proportionate number of cases. The above facts and figures are given here merely to emphasize and magnify the gravity of the situation confronting us and to impress upon the assembly the necessity for and significance of extensive, intensive and whole-hearted soil pollution work. If time and data were available to convert the above information into a dollars and cents statement the size of the problem would be apparent. For instance, let us make an assumption that one death from an intestinal infection entails a monetary loss of \$2,000, including care, medicine, medical attention, loss of time, etc., the 451 deaths from just typhoid fever and dysentery during 1917 would entail a total loss of approximately \$900,000. Yet typhoid fever, hookworm disease, and other intestinal infections are preventable and could have been prevented by providing proper means for the disposal of human excrement. This brings us to the meaning of and functions of soil pollution work.

Soil pollution work embodies the propagation and execution of specific remedial measures to inhibit the further dissemination of such preventable intestinal infections as typhoid fever, dysentery and hookworm from human excreta. The measures to be employed in combating the intestinal infections comprise a well defined plan incorporating several distinct lines of work to be more specifically detailed in a later part of this paper. But briefly, the one most effective weapon to deal the death blow is the sanitary privy—provide individuals or communities of individuals with sanitary privies and the infection and mortality curve will take a sudden decline. The wholesale erection of sanitary privies in rural and

unsewered sections, extensions and enforced connections to existing sewer lines in several communities will accomplish more towards the elimination of intestinal infections than any other one thing.

The dilapidated, open back, insanitary privy is a sight familiar to all of us in both the rural and urban communities. Yet in the light of present day knowledge regarding the relations existing between open privies, typhoid fever and flies, open privies hookworm disease and other intestinal infections the State of Florida is dotted with these foul and most effective poisoning agents. Many are the towns in Florida today boasting and priding themselves on their up-to-date sewerage systems, yet a casual observation in any of these towns will disclose the terrible fact that abominable open privies exist and are constantly used by influential people living amidst a net work of sewers with sewer laterals abutting the very property. And in the face of these evil foci of infection chances are ten to one the man who daily uses the open privy protests vigorously about the way his neighbor keeps garbage cans uncovered in the adjoining back yard. In practically all towns sewers do not penetrate the colored quarters where needed most. The negro maid cook who lives in the quarters surrounded by the innumerable potential points of infection comes into many of your homes to prepare and handle your food—yet her cleanliness is never questioned on this point, it matters little about the sanitation of her living quarters and environment or her neighbor's—whether or not she comes from a home or neighborhood where typhoid is prevalent. In rural communities where no sewers exist the open back privy predominates supreme with hogs and chickens as the sole scavengers. But even here in remote places the privies can at least be made sanitary and fly-proof to protect thereby the people from infection.

It is indeed a great pleasure to announce that a transformation is being effected at many points in Florida, due to efforts of the State Board of Health. In numerous places new or reconstructed privies of one or another type can be observed. Sewer line extensions and sewer connections are being encouraged and enforced, thus eliminating many foci of infection. Among the notable work done along these lines is that in Bay County at Millville and Mooretown by Dr. Tatum, in DeSoto County at Arcadia and in Osceola County at Kissimmee by Dr. Hamblin, in Putnam County at Palatka by Dr. Underwood. At all these points, and many more, insanitary privies have been or are being replaced by Florida Tank Privies. During the past year no less than 4,000 privies have been sanitized in the State of Florida, and now the work is just beginning.

The State Board of Health is inaugurating an intensive soil campaign along lines which will eventually reach every nook and corner of the State. Already two large, well populated areas adjoining the city of Jacksonville have undergone treatment and the

effectiveness of the measures employed are now discernible. In these areas efforts were mainly concentrated on privy sanitation. The plan as now decided upon consists of designating to each District Health Officer a county in his district for intensive work. The county seat will be taken as the fundamental unit in which to commence active survey work. The intensive work to be conducted at the county seat will consist of:

1. A survey of all city ordinances pertaining to public health with subsequent recommendations to the City Council. This will result in the passage of further essential ordinances sufficient to deal with arising problems.

2. A detailed house to house survey to determine a correct sanitary status and score of the city.

3. The issuance of privy condemnation notices which will produce results.

4. The issuance of notices demanding sewer connections within sewered areas, also advising towns to extend lines wherever this will effect the elimination of a sufficient number of privies to warrant the cost of extensions.

5. Administration of anti-typhoid bacterin to all those desiring it. This is especially urged in typhoid infested regions.

6. Co-operative work with the Central Laboratory to the extent of making feces examinations for hookworm infection and arrange for the treatment of all positive cases.

7. Securing the erection of sanitary privies at all schools, churches and public buildings not sewerred, also requesting the installation of other sanitary conveniences deemed advisable.

8. The giving of popular talks for the further dissemination of health information to the people.

This briefly outlined forms the program as it will be conducted. From time to time it may undergo modification but as now standing it is essentially correct.

When work at the county seat is about completed another nearby point in the same county will be attacked along similar lines and so on until the entire county has been covered. Furthermore as the work progresses at the county seat the District Health Officers will visit other points to get the necessary ordinances passed preparatory to the actual commencement of work. Following the completion of one county a second will be undertaken.

The program is a long one that will consume considerable time and patience but one productive of results as will subsequently be shown. After and during the card survey, serving of privy notifications, passage of ordinances, etc., it is a long, hard, incessant struggle to get work accomplished promptly. City Councils are sometimes reluctant to enforce ordinances, and delay frequently. Citizens are going to object and offer resistance to sanitary measures promulgated for their own well being, and are going to delay work as long as possible. Followup work in the field with co-operation from the city authorities will be necessary at all times.

The work to be effective must be conducted along educational lines accompanied by the field and persistent follow-up work. When once the continuous hammering awakens the individual or town to a full realization of what is being done and what the ultimate effect will be, the work will progress with rapidity. It is the educational propaganda that must blaze the trail. This is to be accomplished by means of pamphlets, booklets, posters, slides, popular talks and newspaper publicity. This latter medium reaches nearly every home in the community and through it progress work in the campaign and popular health talk be given.

The completed house to house survey will lay before the community the exact sanitary status and score of the town or city. From the accumulated and compiled results weak points can be detected and precautionary measures instituted to strengthen them; insanitary privies will be enumerated and graded and by the issuance of condemnation notices, backed up by the State law and city ordinances, owners will be placed on record and given limited time to improve conditions; all sewer connections and those properties not connected and accessible will be accurately recorded and subsequently notified; all records of sickness and deaths during the preceding year will be compiled; illnesses at the present time are listed along with other significant data that will place before the people a clean-cut, graphic picture of actual sanitary conditions.

During the progress of the survey the existing city ordinances will be thoroughly reviewed to ascertain their adequacy to deal with the several problems at hand because a rigid inspection may reveal that additional ordinances are necessary. These ordinances will be provided to the city council for consideration and passage.

The effectiveness of intensive soil pollution work can best be judged by the citation of several instances already about completed. In one South Florida city a survey was instituted during the winter. The inspection of the ordinances laid bare the necessity for additional laws to properly handle problems about to appear. The required ordinances were prepared, submitted to the council and passed unhesitatingly, furthermore put into immediate effect. The survey also revealed the fact that within the sewered area 98 houses were accessible to the sewer system but as yet had never been connected and there were approximately 600 open, insanitary privies. Notices were given to all property owners relative to privies and sewer connections and at this time nearly all connections have been made and privies reconstructed. Other work along sanitary lines was executed which will have far reaching effect especially as regards the maintenance of restaurants, food shops, stables, etc. Talks and lectures accompanied this work at all times.

Another survey startled the citizens in a West Florida city recently. During the survey work several prominent citizens inquired into the reason for making such a survey in a town where all the people were healthy and no typhoid fever was ever present.

The customary remark was passed out on all sides at this place, just as it is elsewhere, "Why, we never have typhoid here, only one case last year." The survey at this particular town uncovered seven cases of typhoid fever, sixty-three cases of dysentery, four cases of colitis and a quantity of other illnesses during 1917 among 1,200 people. At the time the survey was being conducted (April, 1918), there was one case of typhoid fever and four cases of dysentery, in the heart of a territory served by 150 open-backed privies. The survey also indicated that 232 out of 301 houses were unscreened and an abundance of manure piles surrounding unprotected against fly germination. Notifications for privy reconstructions have been issued and already work is being done to sanitize this point.

One of the hardest worked districts in the State is that adjoining Jacksonville, where work has been progressing for the past four months. The house to house survey revealed the fact that during the preceding twelve months there had been twenty-one cases of typhoid fever and twenty-four cases of other intestinal infections among 2,600 people. In this district the prevailing method of excreta disposal was the familiar open back privy, there being 600 of these points of infection. No wonder this section had been designated as a foci of typhoid infection! As each house was surveyed the usual privy notification was served and today as a result of insistent, hard work, this section has more than 500 sanitary privies. And for the past two months practically no intestinal infections have been reported to the State as generating in this section.

In this locality work progressed slowly, people were reluctant to do the things requested to improve conditions. It was necessary to arouse a civic pride or inspire a civic consciousness to overcome the many and varied prejudices possessing these people. Two civic clubs were finally organized following several public health talks. After two months work these people awoke to the realization that the State meant business—then work started with renewed vigor. Several people retained their prejudices and indifference until the courts had to be resorted to, but today this one section stands out as an example of what can and will be effected. About 200 anti-typhoid inoculations were given, literature was freely distributed, clean-up days were held, placards posted and after a short time all the people were in accord with us.

The usefulness of taking the laboratory into the field has recently been demonstrated by Dr. Arms at Cocoa, where he spent several days examining feces of school children. Following the examinations arrangements were made for the treatment of all those positive cases.

The entire program as outlined is a long one that will consume considerable time and patience to complete, but in the end will produce telling results. Furthermore it is a program in which the City Health Officer can and must play an important part. In

every city the Health Officer is one to whom the State Officer must appeal and look for assistance and support. The City Health Officer is in an influential position where he can advise the various city authorities. He is generally consulted by his constituents for advice on public health problems. His assistance in every form will be requested and appreciated. To perform the house to house survey it is necessary for the cities to offer some assistance, and here the City Health Officer will be appealed to for the proper aid and to see that work is properly conducted in the absence of the State official. In many little ways the City Health Officer's assistance will be invaluable and by this co-operative work the State and city will be brought closer together in the making of a cleaner, healthier Florida.

Public Health Reports and Records

BY STEWART G. THOMPSON, D.P.H., *Vital Statistician,
State Board of Health*

"Public hygiene is built upon, directed by and is everlastingly in debt to Vital Statistics. * * * Every wheel that turns in the science of public health must be belted to this shaft."

Such was the statement of Dr. John S. Fulton, of Maryland, at a meeting of the International Congress of Hygiene and Demography.

It was the vital statistics of tuberculosis that eventually aroused the nation and brought about the great campaigns pointing toward its extermination. How many thousands of lives have been saved by the application of vital statistics no one can say.

One of the worst blots upon our civilization for generations has been the enormous loss of infants in the first year of life, and until birth registration began to gain some efficiency, there seemed to be very little appreciation of this great loss. It is not the number of babies born that is of value to the community, but the number who reach adult life and bring to it economic wealth and production. It was once thought that a high infant death rate indicated a greater degree of vigor in the survivors. Now it is agreed that the conditions which destroy so many of the youngest lives of the community, must also result in crippling and maiming many others and must react invariably on the direct health of the community.

The present insistent demand for intimate knowledge concerning the conditions under which human beings are born, live, toil and die, is one of the most striking evidences of our social progress, and to meet this demand every case of communicable disease should be reported, every birth and every death registered.

The reports to this department required by law are morbidity, birth and death. The law requiring morbidity reports is comparatively new, going into operation last November. Prior to that time every physician in the State was furnished with complete instructions together with a supply of morbidity report cards. The Bureau anticipated the co-operation of intelligent physicians of the State who realized the importance of knowledge of when and where diseases are occurring. It evidently seems a trifling matter to some physicians to report each case of notifiable disease but it is simply because they do not realize that all big things that are worth while are made up of little things. The reporting of one case of typhoid fever is a small matter but it is of vast importance when we realize the uses that can be made of just such reports when they have all been put together into one big report. The epidemiologist can locate epidemics and the sanitary engineer is guided to the very spot which needs his services. The first and most important step in this work is the reporting of communicable diseases.

Although this law has been in operation nearly nine months, we are getting a very small percentage of the reports. For example: Eighty deaths from typhoid fever were reported to the State during the first five months of this year and only ninety-six morbidity cards received for the same disease during that period. A conservative estimate would show that eighty typhoid deaths represent 800 cases. This indicates that more than 83 per cent. of the typhoid fever cases were unreported from January 1st to June 1st of this year, and information received from local surveys undertaken recently proves that it is not in the least over-estimated.

On January 1, 1917, the Model Vital Statistics Law went into operation providing for the registration of births and deaths. During the calendar year 1917, 11,992 death certificates were received, 6,881 white and 5,111 negro. This gives a crude death rate of 12.2 for the State as compared to 13.5 for the registration area. At first glance it would look as if the State of Florida was very close to the standard, but when we study into conditions and find that 42 per cent. of the population here is negro and the negro death rate 13.2 as compared to 23.0 for the registration area, it is not so near perfect as we would like. To be admitted into the registration area a State must receive a record of at least 90 per cent. of the deaths that occur. We therefore face the fact that our efforts must be centered on securing death certificates for the negroes who do not have undertakers.

The responsibility for filing death certificates has been placed on the undertaker or person acting as undertaker, but so many families in this State do not have undertakers that the duty of filling out death certificates often goes back to the physician who certifies to the cause of death. The health officer or physician who will aid in completing death certificates at this particular time will be rendering a service not only to the health department, but to his community as well. It is the desire of every health officer here to have

the great State of Florida recognized by the Government and if you will give us your co-operation in looking after local conditions it will not take long to put this State in the registration area.

Births are to be registered by the attending physician or midwife. While the physicians and midwives may not be any more negligent in this State than elsewhere, we know that all births are not reported. It is a much more difficult task to secure complete registration for births than for deaths. It was not until 1915 that the Government established a birth registration area and then only six States were admitted. However, quite a number of States have been added during the past year. During the calendar year 1917, 17,921 births were registered, 12,701 white and 5,220 negro. This gives a rate of 18.1 for the State, 21.1 white and 13.4 negro as compared with 24.9 for the registration area, 25.0 white and 20.6 negro.

One problem that confronts us is the practise of midwives. A study of the certificates received last year reveals the fact that 43 per cent. of the entire number of births registered were attended by midwives, and only 16 per cent. of the negro women were attended by physicians. The fact that only 74 per cent. of the whites were attended by physicians is appalling, but when it comes to 16 per cent. there should certainly be something done. Education is one of the first steps that must be taken and no one can bring the matter before the public so well as the health officer himself.

Every health officer is looked up to in his community as authority on health laws, rates, etc., and for this reason should be familiar with the different State health departments so that advice of the right kind may be given. Considerable time and effort has been expended compiling statistical tables of different kinds, all of which are for your use at any time.

The 1917 figures will be published in the near future and in the meantime if you desire advance information on certain diseases or communities it will be gladly furnished. A table will appear in the Health Notes this month showing the number of cases and deaths, by counties, from reportable diseases for April, May and June. A statement of this kind will be published quarterly and we hope will be used as a comparative health index for counties and districts.

Vital statistics are the basis of proper advertising of the health department. But little can be accomplished in sanitary reforms without the co-operation of the people and the first effort of successful administration has always been to arouse the people to a sense of the dangers of insanitary conditions. This can only be done by advertising; therefore, the frequent publications of death rates and editorial comment on unusual conditions is a proper and necessary advertising, and the people must be trained to understand and interpret death rates as they do the records of the weather bureau. For instance; every one knows that ninety degrees is very hot and that zero is very cold, but who among the average readers

can say that a death rate of fifteen per thousand is high or low. The people should learn that a low death rate is a matter of congratulation and a high death rate an indication that something is wrong that needs to be corrected.

As Health Officers and workers your co-operation is solicited for the building up of a Vital Statistic Bureau in this State that will surpass all others.

The Problem of Venereal Diseases in Relation to Public Health

By O. H. Cox, *Assistant Surgeon U. S. Public Health Service*

This is essentially a war council because we are met to discuss ways and means of creating better health, and that is a prime essential to such a man-demanding enterprise. In your discussions I want you to take up freely any point you may feel like stressing or differing in. This is a most opportune time for this subject to be brought up because each of your communities will soon be required to see a great light, if you have not already.

Sir William Osler the Great, says: "Know syphilis in all its manifestations and ramifications and all else will be added unto you clinically." No more concise summary could be made of the multiplying facts which demonstrate that syphilis is scattered through all classes and nationalities of the world and is a determining factor in most of the diseases from which men die before their time.

There have been many estimates as to how prevalent venereal diseases are but it seemed to require war to focus proper attention on the serious aspects to the people at large. (We doctors should have always known the terrible ravages).

The Allies and Central Powers both found thousands incapacitated, how many we will not tire you with. On the advent of the United States into the conflict, the recruiting officers and draft boards had to turn back an enormous amount of young soldier material. Industrial plants of all kinds could not work to their maximum capacity. And so it went that our national efficiency was lowered by the great prevalence of a group of contagious and actually preventable diseases.

It was only logical that the Government authorities should consider stringent methods to increase the effectiveness of our war-winning forces.

To briefly outline what is done for troops by the War Department: Healthy camp amusements are systematically provided. Women are kept from loitering about. Frequent physical inspec-

tions are held on whole regiments or sections, so that any man found diseased cannot conceal his condition long. Then actual treatment is instituted and if not incapacitated for all duty he is placed in a "non-effective" company and all leave from camp curtailed.

This goes hand in hand with prophylaxis. A station is usually maintained in a nearby town or city convenient to where the men visit when off duty. A man must report here after exposure and go through the established routine of an injection of a silver salt, application of calomel ointment, etc. Now should he develop an infection, he will only lose his pay while "non-effective." Otherwise he would in addition be subject to courtmartial because he had disobeyed an article of war. This is a rough outline of what is done where discipline makes much possible. I may add that this is only one of the many things that our young men are learning about themselves for the first time in regard to health.

But here come the questions:

1. From whom do the troops come?
2. With whom do they associate?
3. To whom will they return?

You have thought of these questions. The answer to each may be made briefly:

1 A. They come from civilians and therefore the source must be kept uncontaminated when and where possible.

2 A. They visit civilians so these must not be allowed to infect them.

3 A. They will return some day (the majority) and they will demand an accounting.

People must have learned to look these facts square in the face and to have acquired the ability to apply a remedy. Education must consist of developing in the minds of the people fundamental facts concerning conditions which threaten the whole body politic.

With these preliminary remarks let us proceed to consider the problem from cause to effect. We will try to bring out the reasons for the national program of enlightenment and treatment, which is the order of the day. Cunningham writing in the Boston Medical & Surgical Journal, stated that it is a conservative estimate that fully one-eighth of all human diseases and suffering comes from this source—syphilis and gonorrhoea. Consider that every year in the United States; 770,000 males reach the age of maturity. Is it too much to say that at least 60 per cent., that is, 450,000 of these young men will at some time in life become venereally infected. The author thinks that 80 per cent. do before reaching the age of thirty years.

I will not try to state the case of the negro race; you know it better than I do.

There is more than one mode as well as source of infection. The innocent may suffer as well as the so-called guilty. That is why all persons, chaste, upright, properly living, young and old

should know the essential facts. When the best evidence, as given in the literature, is considered, we are forced to the conviction that the great bulk of venereal infections among men are derived from regular prostitutes, open or clandestine. We will say 90 per cent. at least. That acquired from adulterous relations is comparatively negligible.

This simply means that any sanitary measures taken for the prevention of venereal disease which do not include some method for treating the problem of prostitution are doomed in advance to failure, since they will ignore the *main source* and root of the diseases. We have found our *main cause* and we already pretty well know the *effect*. The sanitarian (in which classification you should all place yourselves) wishes to know what practical measures he may take at once in regard to prostitution to limit the spread of venereal diseases, which are a present menace to society. They are truly an ulcer of the body politic.

There are two phases to its control—Sociological and Medical. The Sociologists will insist on the single standard, early marriage, self control, changed economic conditions, education that forms character, and as Huxley says, "Molds the desire to live in accordance with the laws of nature." These are all very commendable and we should not lose sight of them in our efforts as sanitarians. Proper balance and poise is needed at all times.

Now are you going to act like Wm. Podsnay, who refused to entertain any disagreeable topic, or are you going to take active measures to limit venereal disease? You may not be able to eradicate prostitution, but you must deal with it toward that end.

Sociological reform you probably will acknowledge is not in your line. You have only four other methods remaining:

1. *Laissez-faire*—which defined by Webster is French for "Let Alone," suffer to have its own way; or take its own natural course.

Such a policy is responsible for the present prevalence of venereal disease, so it can have no place in our scheme of things.

2. *Suppression*—This is best illustrated by closing "restricted" districts and then stopping there. Vice is not flaunted in public but is driven into corners where the vicious will find it, but where it possibly will not entice the innocent and unwary. Public opinion is needed to bring about even this much. In the meantime the volume of the stream remains the same and though dammed here it will break out, sooner or later, in some other place.

3. *Regulation* (or Reglementation). If any of you have read Abraham Flexner's *Prostitution in Europe*, you have been struck by the fact that segregation, medical inspection of prostitutes, and other similar means have been a fiasco as far as prevention of venereal disease is concerned. He spent time and study in all the great centers of the Old World and his arguments and conclusions are definite and convincing.

When you consider the undoubted fact that the moral sense of

the community is opposed to and will not tolerate regulation, the situation becomes such that the sanitary officer might as well abandon any intention to establish such a system, even though he may personally believe in it.

Treatment—If you will agree for the sake of argument that Regulation will not work; that Sociological Reform is a matter of gradual evolution and therefore not adapted to the demands of the hour; that Suppression will not entirely suppress; then we must turn to Systematic Treatment as “the most hopeful method” to reduce the number of venereal infections.

No objections can be made on moral grounds. And *if* all infected individuals are rendered incapable of transmitting their infection the disease will disappear. I will not detail plans and methods of how this can be done. The discussions later will bring out the phases pertinent. Furthermore, you will find a model ordinance in effect in Jacksonville which makes venereal diseases reportable because they are infectious, and provides for their treatment at public expense, if necessary. You can avail yourselves of this opportunity to see the machinery as it is being installed as well as the United States Government clinics which have been in operation some time and to date have administered treatments to patients; Salvarsan to the extent of has been given; and Wassermanns taken.

As a Health Officer your course should be like this:

1. Inaugurate a proper system of publicity. Newspapers, lectures, sermons, posters, personal work.
2. Secure the passage of a good notification law. Publicity will demand this.
3. Create the machinery to enforce it.
4. Provide adequate laboratory facilities. (See State).
5. Disseminate information to the profession with regard to the facilities for diagnosis and treatment provided by your health department. Also tell them what standard of cure you insist on.
6. Get all existing hospitals and dispensaries into the best of shape and make frequent critical inspections.
7. The most important link in your chain is a specialized clinic. One well conducted will be worth a ton of literature scattered about in your community. This will be for those who will not pay a good private physician.

This constitutes no abuse of personal liberty. Society should have the power of protecting itself. Very few would refuse to or accept treatment if they knew that quarantine or arrest would follow this refusal.

You must consider further measures to prevent infection insontium.

1. Barber shops must be controlled.
2. Soda fountains, restaurants and eating places generally should be made to keep clean.

3. Minor operations like:

Tattoo artists,

Corn doctors,

Rabbis,

Midwives,

Beauty doctors should be under supervision.

These are things to think about and I trust you can solve your own community problems. This is a subject worthy of thought.

DISCUSSION

Dr. J. Lee Kirby-Smith made stress on three phases of the venereal problem.

First.—Co-operation of all physicians.

Second.—Treatment of venereal diseases.

Third.—Removal of prostitutes.

The first to be obtained by every means in the power of the health authorities, having in view the specific location of the sources of venereal infection.

Second.—Dr. Kirby-Smith calls attention to the percentage of venereal infection as given by Dr. Cox, 60 to 80 per cent., and the utter impossibility of one or two venereal clinics caring for the vast number of infections. The situation necessitates government control of the practice of medicine. All venereal patients of syphilitic character are rapidly made non-infectious by prompt treatment.

Third.—It is recommended that all officially or legally declared prostitutes be severely dealt with, even to the extent of capital punishment (fine) a few examples made would have a wholesome effect on prostitution.

General.—Considering man's polygamous tendency the high percentage of venereal infection, the secretive nature of the disease, making a sociological problem that requires every means in the power of health authorities.

* * *

It seems to me that the most logical solution of this question of control of venereal diseases is in educating the laity as to the seriousness and consequences following such infections. The great majority of cases, especially in the ignorant class, have the idea as they express it so often, "Oh, it don't amount to anything; I would just as soon have it as a bad cold." And not only that but they will go to the drug store and purchase some astringent injection, stopping the discharge and driving the infection deeper into the tissues, imagining that they are well and go right on having sexual intercourse, infecting some innocent person and so on until it becomes an endless chain, whereas, if it could be brought home to them in such a manner as to cause them to seek expert and competent counsel who would impress upon them the seriousness of

such infections, then I believe, that in the course of time there would be a complete eradication of these diseases.

Am going to give you a report of the work we have done in the Government Clinic for Colored, during the month of July, and it will give you an idea of the possibilities of education and treatment of these cases:

Syphilis—Males, 152; females, 60.

Gonorrhoea—Males, 127; females, 83.

Chancroids—Males, 17.

Wassermann tests, 133.

Salvarsan administered, 85.

Diagnostic Laboratory Examinations

BY B. L. ARMS, M.D.

There are many ways in which the laboratories are of use to the health officers and they can be made of much greater value to your cities and districts if you will use them more. You can at any time get containers in which to submit specimens, all you have to do is to ask for them and they will be sent at once.

When you have a suspected case of diphtheria a swab should always be sent and each case should be released only when two successive negatives have been obtained from both nose and throat even when the clinical symptoms have been confined to the throat alone and in this way many secondary cases will be prevented.

In suspected cases of tuberculosis a single negative finding should not be accepted as conclusive but many specimens should be sent. It should be remembered that the laboratory examination is but one part of the examination of the case and the most important part is the clinical examination. This is true to probably an even greater extent in the examination for tuberculosis than in any other condition and must not be lost sight of. This fact is the strongest reason why the laboratories do not report on the examination of sputa to the patients but insist that the report go through the physician for it needs the clinical interpretation.

Remember also that the laboratory cannot find tubercle bacilli in the sputum until there has been breaking down of tissue and discharge of the bacteria into the bronchi or bronchioles. Hence the diagnosis, in order to accomplish the greatest amount of good to the patient, should be made before it is possible to find the tubercle bacilli in the sputum.

In the examination of feces for intestinal parasites especially after treatment has been given, do not be satisfied with a single negative.

We receive many bloods for the diagnosis of typhoid, the blank showing that the case has not been running long enough for the development of the agglutinins in the blood. Of course a negative report in these cases means absolutely nothing. A partial reaction if persistent is of value showing a low resistance on the part of the patient but of course a single incomplete reaction may be caused by taking the blood before a complete reaction can be obtained, and on the other hand may be followed by a straight negative.

Many bloods are sent for the diagnosis of malaria after the patients have had large amounts of quinine, hence under these conditions many cases of malaria fail to show the parasites.

It is far better to withhold quinine until after the diagnosis is established for frequently some other condition is responsible for the symptoms and if it is a case of malaria and you have the laboratory proof of it, it is possible to institute more radical treatment than otherwise.

The complement fixation for syphilis has been made possible for all in the State and, although it was only added to the list of free examinations in 1916, this test led all others at the central laboratory in point of numbers during the year 1917. During 1918 we will make many more of these tests than we have ever made and there is every reason to believe that it will be of the greatest value to the State when it is considered as a part of the routine examination of all patients.

There is one condition in which you can assist both the State and your people, and that is when you have a suspected case of rabies, the animal having bitten some person or persons. I regret to say that many of you advise that the animal be killed at once and the head sent for examination. The only case when this is justifiable is when the animal, usually a dog, with the furious form of the disease, is making a run over the country; under these conditions he should be killed, otherwise shut up the animal and if it is a case of rabies he will be dead within a very few days, when the head should be sent, but if he is alive and perfectly normal a week after the bite you can assure the patients that they have obtained the very best negative diagnosis it is possible to secure and that they need have no fears of rabies. When a head is sent it should be placed in a pail or can and this packed in a candy or other large bucket or box surrounded by ice and sawdust. Do not send at such a time that the head will be in the express office over Sunday as the ice will probably not last and if the head is decomposed too badly a microscopice examination will be impossible.

The State furnishes diphtheria and tetanus antitoxin, typho-bacterin and vaccine virus. For the convenience of the health officers and physicians the diphtheria antitoxin and typho-bacterin is for distribution at various drug stores over the State as well as at all the laboratories.

The Central Laboratory at Jacksonville is the distributing point for all the biologics and all requests for them should be

directed to the State Laboratory, Jacksonville, and they will be forwarded by the first mail.

Make use of the laboratories, for this is the only way in which they can help you, and the more you ask us to do the better it will please us.

Public Health Publicity

BY DR. J. F. WILSON, *City Health Officer, Lakeland, Fla.*

The progress of Hygiene and Sanitation has been so rapid that the subject of Preventive Medicine has become a specialty. It has grown apace with other branches of medicine, and now has a scope so broad as to make it necessary to include every means for bringing it in an educational way before the general public. Hence the work of all health authorities becomes that of educating the general public.

The sanitary administrator realizes at once that there are certain things which the public health authorities must do for the body politic; that there are certain things which the citizenship must do for itself, and that there are certain things which can be done only through the co-operation of the citizenship with the health authorities. This then makes education of the general public necessary, because it must be informed as to its need for personal and public hygiene and sanitation.

As it is almost impossible to prevent or suppress a communicable disease without a knowledge of its mode of transmission; it is therefore necessary that the general public be given a knowledge of the scientific bases upon which the prevention of disease and the maintenance of health rests; for exact knowledge has taken the place of fads and fancies in hygiene and sanitation; and preventive medicine has become a basic factor in sociology.

People generally are awakening to an interest in sanitary matters and the prevention of disease; and it is through this interest we hope to accomplish more than has ever been done in the past. Much of this is due to publicity and to education in the principles of hygiene and the practice of sanitation. Further improvement must depend upon the instruction of people along lines even broader and more thorough than ever before.

Health Officers should therefore use the most powerful means of publicity today—the newspaper press—which affords him the greatest means of reaching the general public.

The newspapers, I find, are always anxious to accept articles for the benefit of the public, and I believe if all health authorities would avail themselves of this privilege much good could be accomplished.

As you always find much patent medicine and other nostrum

propaganda in the papers, bill posters, pamphlets, almanacs, etc., which are freely distributed among the public, I believe that health officers should hand regularly well prepared papers to the press for publication, that will give the public the proper idea of caring for themselves and how to prevent sickness.

I think as health officers we should discuss each communicable disease in a short article, in our weekly and daily papers, telling the public how to prevent and care for such disease as discussed.

City Boards of Health should have suitable cards, to be distributed to every house, printed with general rules for the proper care of the homes, the yards, and premises, the disposal and care of garbage, refuse and accumulated wastes.

These cards may be put to a double use by using both sides, giving the above information on one side, and then on the other give general rules for preparing and keeping food stuffs in a pure and sanitary condition for consumption.

Health Boards should also have cards for distribution, printed with a short discussion of the prevention and care of all contagious and communicable diseases. These cards to be sent out at regular intervals to every house. To give one to each school child would bring good results.

I believe the monies spent in this way will be beneficial, as the results will be collateral. A campaign directed against any contagious or communicable disease will bring forth a collateral result; for instance a campaign for the suppression of hookworm disease will eliminate the amount of typhoid fever and dysentery, together with other infections.

Therefore any campaign directed at the prevention of any disease and deals with the sanitation of the invironment, will embrace almost the entire range of preventive medicine.

*If Your Community
is not*

100%

Patriotic in its

Protection

of the

Public Health

Who is to Blame?

Are You Doing

Your Share?

FLORIDA HEALTH NOTES



OFFICIAL BULLETIN PUBLISHED QUARTERLY BY THE STATE BOARD OF HEALTH

EDITED BY DR. W. H. COX, STATE HEALTH OFFICER

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LET us not forget that the entire child goes to school—body, soul and mind. Any system of education which ignores one or the other of these factors, will be to the disadvantage of the child.

—Rosenau.

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THE Laboratories of the State Board of Health have been established for the purpose of giving aid to the people of this State, through physicians, by making investigations and reporting findings which may be of assistance in diagnosing diseases. There is no charge for this service. It is performed gratuitously. Physicians and surgeons in need of laboratory service are earnestly urged to make use of the facilities offered by the laboratories of the State Board of Health of Florida.

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THE value of Health Notes may be greatly increased if physicians and nurses will aid in causing it to be placed in the hands of parents to whom such information as it contains may be useful. Copies will be mailed to any address upon request.

INFLUENZA POSTPONES CONVENTION AMERICAN PUBLIC HEALTH ASSOCIATION

The influenza epidemic caused the postponement to December 9-12 of the annual meeting of the American Public Health Association, which was to have been held October 14-17. A good attendance was assured from the upper Mississippi Valley, where influenza had not yet become generally epidemic. However at the urgent request of the Surgeon General of the U. S. Public Health Service and of many Eastern speakers and delegates, the later date was set, it being judged unwise to take sanitarians from their posts at this time.

INFLUENZA SYMPOSIUM AT A. P. H. A. MEETING

The influenza epidemic will be made the most important subject of discussion at the December meeting of the American Public Health Association. Some of the questions which will be discussed are the following:

Is influenza vaccine efficacious as a prophylactic?

What type of vaccine is most useful?

Does it help as a therapeutic?

What about nose and throat sprays?

What are the results with convalescent serum?

What about the open-air treatment?

How can the health officer co-ordinate hospital, medical, health and relief agencies in similar calamities?

How can we take advantage of the epidemic for the benefit of more adequate health appropriations and better community and personal hygiene?

Foreword

The terrible, world-wide epidemic of influenza, with its complications and devastations was visited upon Florida, and took its toll in sickness and death. Very soon the eight District Health Officers had more than they could do to combat and control the disease, and an appeal was made for voluntary medical assistance throughout the State. This appeal had the approval and co-operation of the United States Public Health Service. Calls came from a dozen different places in the State, and as many extra physicians were appointed by the United States Public Health Service through the State Board of Health to render medical aid. These physicians were paid jointly by the United States Public Health Service and the State Board of Health. More than a score tendered their services—this speaks nobly for the physicians of Florida. The United States Public Health Service, acting through their Assistant Surgeon, contributed generously to the cause. The State Board of Health appreciates the assistance and co-operation of the United States Public Health Service, which came at so opportune a time, and desires to thank the United States Public Health Service for the assistance so ably rendered through their Assistant Surgeon stationed at Jacksonville.

Child Welfare Work

The State Board of Health recently created a Bureau of Education and Child Welfare. Child welfare work will be the chief feature of this department as it is well known that the educational features of State health work belong to no one particular department, but play an important role in all the departments.

It has been frequently said that sanitation and education go hand in hand or that sanitation is a question of education; be that as it may, we believe that if the proper information along hygienic and sanitary lines gets to the public, and they once understand that it is for their welfare, and their children's welfare, they will give us their support and co-operation in public health work.

No health department can succeed without a certain amount of co-operation by the people, hence the importance of getting certain information before the people. Child welfare work as a special department of the State Board of Health is a new departure and it is expected to accomplish much good. The work of the following counties mentioned would no doubt be the proper thing for all the counties in the State to do:

Lake and Orange counties have traveling teachers—one in each county. These teachers grade the schools as to sanitation, condition of buildings, rooms, and also grade children as to cleanliness, personal care, etc. They give simple health talks, hold story hours in country schools, using stories bearing on mental and physical health.

West Palm Beach, Pinellas, Hillsborough, Brevard and Lake counties have social workers or visiting nurses, and follow up the work of the examining physician, seeing parents as to the remedial work, giving eye, ear and nose treatment under directions of physicians, and showing parents how to give these treatments; also looking after conditions of school rooms, buildings and grounds.

This is some of the work now being done in the above named counties and the State Board of Health will gladly assist and co-operate with any of the counties in such work. The State Board of Health hopes that in creating the Department of Child Welfare and placing a competent woman physician at its head, it will be the means of helping this State to reach her quota in saving the lives of one hundred thousand children, and that all the children in this State will be greatly benefited. It is results that count, and good results is what the State Board of Health desires.

COMMUNICABLE DISEASES AND SCHOOLS

The opening of schools in the fall is usually marked by an increase in the number of communicable diseases. Seasonal changes are considered to have some influence, but the real explanation is mainly represented in two factors—the schools and the child. The damaging influence upon the health of the children from the poor ventilation, badly adjusted seats and desks, crowded school rooms, worry and fatigue are all predisposing factors in communicable diseases. One remedy would be to correct as nearly as possible the above mentioned defects.

The child is the other factor in the communicable disease problem among the school children, and probably is the most important factor inasmuch as the child brings the communicable disease to school, and is in turn the recipient of such communicable disease. The parents are very largely to blame for this and not the child. Parents too frequently overlook the needs or conditions of their children before sending them to school. Parents are sometimes responsible for the spread of communicable diseases in that they permit their sick child to go to school.

No child that is sick, no child with an acute eruption or an acute bad cold should be sent to school, or be permitted to play with other children. It is wrong for the sick child and unfair to the other children. A child who is sick cannot profit by going to school; it only interferes with the work of the others in the class and may be the source of serious illness to a great many others. No child should attend school with an acute cold or sore throat until examined by a physician and obtain a health certificate.

All precautions should be taken to safeguard the health of children. To teach children to keep in good health by the right means of living should be an important part of their education.

A WELCOME TO WOMEN IN PUBLIC HEALTH WORK

With the call to the colors of medical men, sanitarians and health officers, great gaps have been made in the ranks of defenders of the health of the civilian population. This is even more notable in public health circles than elsewhere because, public health science being comparatively young, its practitioners are largely within the draft age.

The suggestion naturally arises: why should not young women already trained or available for training be used to fill many of these positions? The supply of women physicians really qualified to undertake public health work is probably small, but some of those recently graduated ought to be fairly well prepared and others might soon prepare themselves by short courses in one of the several schools now available for those lacking public health training. Moreover, there must be in the medical schools a good many young women who, without stopping at present to finish their courses for

the degree of Doctor of Medicine, might interrupt their medical training to take that brief but indispensable technical training, which would fit them for public health positions.

Recently, the Chairman of the Harvard-Technology School for Health Officers, discovering from his own observation and from the applications which he has been receiving and unable to fill for health officers, laboratorians, industrial health inspectors, municipal filter operators and the like, the great scarcity of trained public health workers, has visited the larger women's colleges in Massachusetts, making addresses on the need and opportunity for women in all sorts of technical pursuits, and appealing particularly to those seniors having medical or semi-medical tastes to prepare themselves in chemistry, physics, and biology as thoroughly as possible before graduating in June next, and then to take during the summer intensive work in public health subjects which will fit them for professional positions in laboratories, inspectorships, and the like, possibly by the first of next October.

This movement is not confined to the East, for Prof. W. H. Frost, of the University of Wisconsin, states that a considerable number of his women students in laboratory courses are finding employment in public health laboratories, where they are said to give efficient service.

We are glad to commend this undertaking, and we greatly hope that many young women of ability, education, and taste for public health work, may within a few months turn their faces toward public health schools and prepare themselves as thoroughly as possible for the numerous public health positions already open, as well as for the much larger number likely to fall vacant in the near future.

There is altogether too much tendency on the part of young men and young women to rush into army or navy service of one kind or another, to the neglect of the welfare of the civilian population upon which, after all, the war must depend for supplies and resources. General Gorgas was entirely right in emphasizing in one of his addresses before the American Public Health Association in October the fact that the physical and sanitary welfare of the Army and Navy is no more important than that of the civilian population upon which it depends; and the entrance of duly qualified and well trained young women into the ranks of public health workers will, we are sure, be welcomed by all who have the interests of the whole American people at heart.

HEALTH OF CHILDREN DISCUSSED

Neither the rural nor the city child has any advantage over the other in the matter of health, according to the Child Labor Bulletin, published by the National Child Labor Committee. In an article on "The Draft as a Test of the Nation's Physical Stamina," by Edward N. Clopper, an analysis of the per cent. of men rejected for physical reasons shows that exactly the same per cent. (26.6) were rejected from rural and from urban districts. Recent studies of school children have tended to prove that the country child is not as healthy and robust as the city child, due largely to the fact that more measures have been taken by the cities for the preservation of children's health. The draft figures show that the country boy is still holding his own but that he has no margin, and that unless the rural districts follow the example of the cities in taking care of their children, the cities will soon outdistance them.

Another article dealing with the health of children, "Physical Welfare of Employed Children," by Florence I. Taylor, points out the necessity for medical supervision of children at work. "The number of child workers is being rapidly increased by the war," says Miss Taylor. "Are we so well satisfied with the conditions under which they work that we are willing to have their numbers doubled without increasing our protective measures?" Most States have medical inspection systems in their schools and a number of States require children to pass a physical examination before they can secure a permit to work, according to the article, but after they have once entered industry there is no State that requires them to be periodically examined to see whether they are working at tasks harmful to their health. The article cites many cases of children employed at occupations known to affect seriously the health of adults and points out that an undeveloped child is very much more susceptible to disease than an adult. Tuberculosis, toxic poisoning, muscular strain and various forms of occupational neuroses are among the diseases from which employed children suffer. A study was made in one State to discover why children changed their work so often and it was found that two-thirds of them left because of the physical discomfort of their surroundings. "Are we justified," asks the article, "in view of the evidence showing the direct connection between many kinds of work that children do and the diseases or defects from which they suffer, in relying solely upon their instinctive dislike of disagreeable or exhausting tasks to protect them from injurious occupations?" A special force of medical inspectors attached to the State Labor Department and working under the supervision of the State Board of Health is recommended as the best way to insure proper medical supervision of employed children.—*Michigan Health Notes.*

WATCH OUT!

The Board of Health's rules come
 To our house to stay,
 To report the ketchin' diseases,
 Keep the neighbors' kids away.
 For if you don't report 'em,
 There ain't a bit of doubt,
 That the Board of Health'll git you,
 Ef
 you
 don't
 watch
 out!

Heads of families and physicians who are responsible for the care of cases of communicable diseases, who do not report these cases promptly, and who do not follow implicitly the requirements of the State Board of Health and local regulations, are guilty of nothing short of criminal negligence.

The United States Public Health Reports says: "NO HEALTH DEPARTMENT, STATE or LOCAL, CAN EFFECTIVELY PREVENT or CONTROL DISEASE WITHOUT KNOWLEDGE of WHEN, WHERE, and UNDER WHAT CONDITIONS CASES are OCCURRING."

For the express purpose, as stated above, the Florida State Board of Health has adopted RULES AND REGULATIONS GOVERNING MORBIDITY REPORTS, which are to be put into operation on November 1, 1917, and on and after that date it will be required that "every person who in the State of Florida treats or examines for the purpose of diagnosis or treatment any person suffering from or afflicted with, or who suspects that any person treated or examined by him (or her) is suffering from or afflicted with any of the diseases made notifiable," named in Section 2, of the Rules and Regulations Governing Morbidity Report, "shall report such case to the State Board of Health," Jacksonville, Fla.

It is absolutely necessary that the State Board of Health have at its disposal the information required under these rules that the Public Health Work of Florida may be carried on in an intelligent manner. It is the duty of the State Board of Health to lower the death rate to the possible minimum and prevent all unnecessary sickness that is due to preventable causes, and unless this is done it is not performing the service for which it was created and has been maintained.

Your full co-operation is earnestly solicited that the people of Florida may know when, where, and what preventable diseases occur within its borders so that every effort may be put forth to make Florida the most healthful State in the Union.

Bureau of Vital Statistics

BY STEWART G. THOMPSON, D.P.H., *Statistician*

During the epidemic of influenza daily telegraphic reports were received by this Bureau giving the number of deaths occurring from influenza and pneumonia in certain cities of the State and this information was relayed each day to the United States Public Health Service as well as to the Health Officers of Florida.

From the information thus received the following table has been compiled, showing the deaths daily by cities. The twenty-seven cities listed thereon represent 30 per cent. of the population of the State.

On pages 76-77 is a chart showing graphically the number of deaths from influenza and pneumonia occurring each day from October 5th to November 5th, 1918, as compared to the same period in 1917. After noting the terrific cost in lives the statement was made that better reports have been secured this year than last. This, however, cannot in any way account for it as we received more death certificates for both July and August of 1917, than for the same months in 1918.

While we have not yet received the original death certificates on which to base a complete study of the epidemic it was deemed advisable to give out the information already at hand and later give the results of a study based on the entire population of the State.

The last table shows a comparison of cases and deaths from reportable diseases occurring in the State during July, August and September, 1918. A similar table may be found in the August HEALTH NOTES for April, May and June.

Please note the list of Reportable Diseases on the inside of the back cover. It has been planned to carry this list in the same place in every issue of the HEALTH NOTES, so when in doubt as to the diseases that are reportable you can refer to your last FLORIDA HEALTH NOTES.

DEATHS REPORTED FROM INFLUENZA AND PNEUMONIA
In Twenty-seven Cities of Florida, October 5th to November 5th, 1918

October	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
November															
Jacksonville ..	6	10	12	22	27	33	36	31	45	28	27	30	26	18	18
Tampa	1	1	1	3	2	2	..	3	3	3	8	11	12	18	12
Pensacola	5	13	6	8	8	20	11	6	14	7	6	6	5	4	6
Key West.....	..	..	1	1	..	1	2	7	2	6	2	3	3	2	7
Miami .....	..	1	2	..	2	1	1	3	6	7	3	..	4	5	6
West Tampa..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2
Lakeland ....	..	..	..	..	..	1	..	..	..	..	..	2	1	..	..
St. Petersburg	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..
Gainesville ...	2	..	..	1	2	2	..	2	..	..	..	1	3	2	..
Orlando .....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3
St. Augustine.	..	..	..	..	..	..	1	2	1	1	..	1	1	1	..
Ocala	1	..	..	..	..	..	..	..	..	1	..	1	..	..	2
Tallahassee ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Sanford .....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Palatka	1	..	1	..	..	3	..	..	..	1	..	1	..	1	3
Daytona .....	..	..	1	..	..	..	..	..	1	1	..	..	1	..	..
Kissimmee ....	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..
W.Palm Beach .	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..
DeLand .....	..	..	..	1	1	..	..	1	..	1	..	2	1	1	..
Quincy	1	..	..	1	..	..	1	1	2	3	..	2	..	1	1
Arcadia .....	..	..	..	..	1	..	..	..	..	..	2	2	1	..	..
Bartow .....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Apalachicola .	1	..	..	..	..	2	..	1	..	..	..	..	..	..	1
Bradentown ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plant City....	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..
Fort Myers....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Fernandina ..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1
Total.....	18	25	24	37	43	65	53	57	74	62	52	64	65	56	63

DEATHS REPORTED FROM INFLUENZA AND PNEUMONIA

In Twenty-seven Cities of Florida, October 5th to November 5th, 1918—(Con.)

20	21	22	23	24	25	26	27	28	29	30	31						Total
												1	2	3	4	5	
17	15	9	7	10	5	8	2	3	5	1	3	1	2	3	1	1	462
17	22	16	19	21	13	23	14	12	14	14	13	5	6	6	6	2	303
2	3	3	1	1	..	2	3	1	1	1	1	..	..	..	..	..	144
4	2	3	4	5	3	2	5	1	1	1	1	..	..	5	..	..	74
4	12	4	1	3	1	3	1	2	..	2	2	4	..	1	1	1	84
1	1	..	1	1	..	2	2	2	..	..	1	..	..	..	..	..	14
..	1	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	8
..	..	..	..	1	1	1	..	..	2	..	..	..	..	..	..	..	8
4	..	..	..	..	1	1	..	..	1	1	..	2	1	..	..	..	26
..	..	1	..	..	1	..	..	1	..	..	2	..	..	..	1	2	12
..	..	2	..	..	2	2	..	..	..	..	1	..	..	..	..	..	15
1	..	3	1	..	..	1	2	..	..	2	..	..	2	..	1	..	18
..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
2	..	..	..	..	..	..	1	3	2	1	..	..	..	1	1	..	12
1	..	..	..	1	..	..	4	..	2	..	1	..	..	2	..	..	22
1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	7
..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
2	..	..	1	..	..	1	..	1	..	..	..	2	..	..	1	..	11
..	..	2	..	..	..	..	1	..	..	2	..	..	1	..	..	..	14
1	..	..	4	..	3	..	..	..	..	..	1	..	..	..	..	..	22
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	9
..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	3
..	2	1	1	..	1	..	..	1	..	..	..	..	..	..	..	..	11
..	..	1	..	2	1	..	..	..	..	..	..	1	..	..	..	..	5
1	2	..	1	2	2	..	2	4	2	1	2	..	3	..	..	..	24
..	..	..	1	3	..	..	..	..	..	1	..	1	1	..	1	..	10
..	..	1	..	..	..	..	1	..	1	..	1	..	..	..	..	..	8
58	62	47	42	50	35	47	39	32	31	28	29	17	16	19	16	6	1,332

NUMBER OF CASES AND DEATHS REPORTED FOR JULY, AUGUST AND SEPTEMBER, 1918

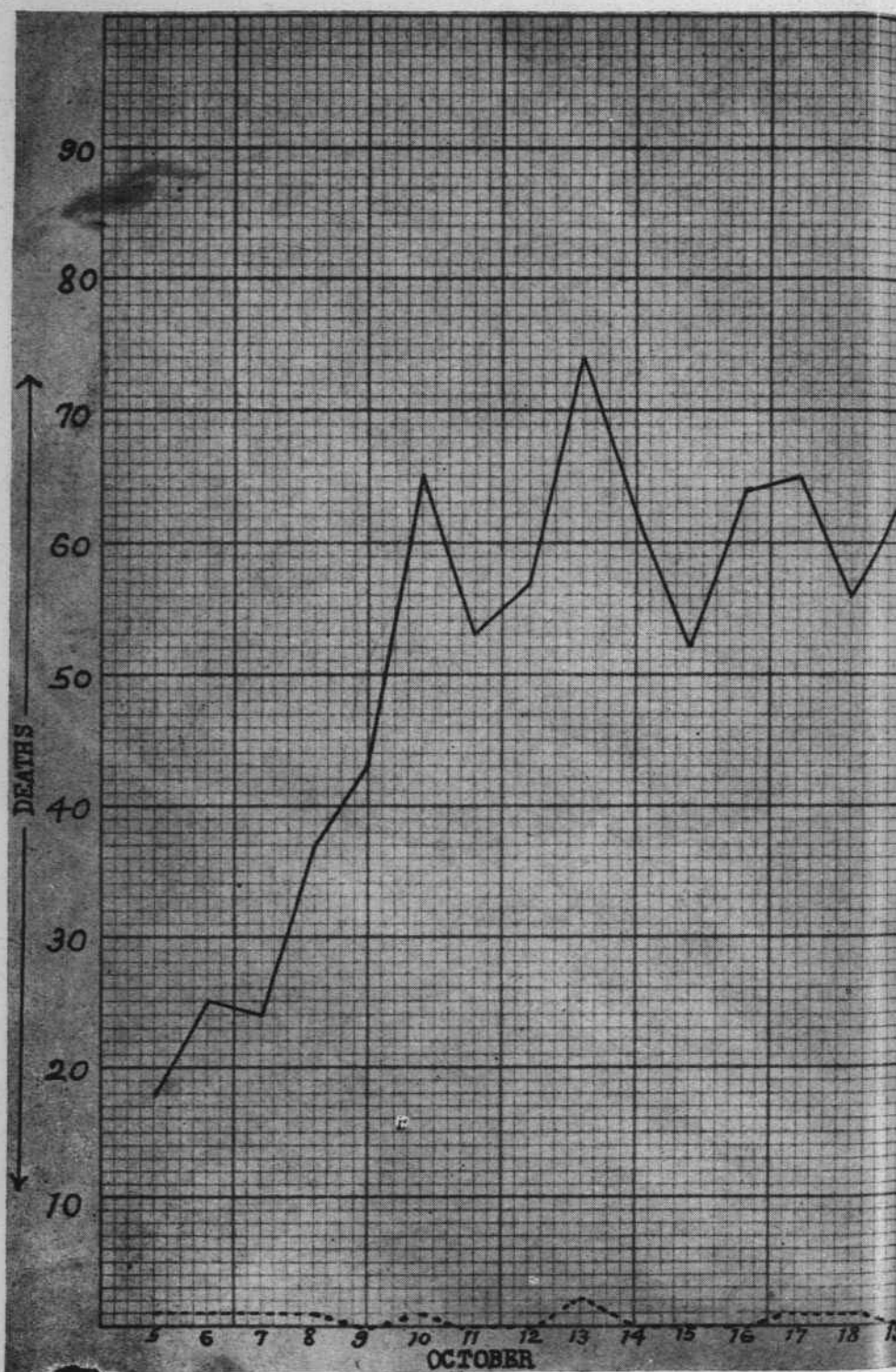
COUNTIES	Typhoid		Malaria		Smallpox		Measles		Scarlet Fever		Whooping Cough	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
State Total.....	224	80	495	71	11	.....	242	9	16	.....	177	30
Alachua	4	3	4	4	.....	.....	1	.....	1	.....	.....	.....
Baker .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bay	1	1	3	.....	1	.....	.....	.....	.....	.....	.....	.....
Bradford	2	2	12	2	.....	.....	4	1	.....	.....	.....	.....
Brevard .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Broward .....	.....	.....	7	2	.....	.....	.....	.....	.....	.....	.....	.....
Calhoun .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Citrus .....	.....	.....	43	.....	.....	.....	.....	.....	.....	.....	2	.....
Clay	1	1	20	1	.....	.....	.....	.....	.....	.....	.....	.....
Columbia	1	2	.....	1	.....	.....	.....	1	.....	.....	.....	.....
Dade .....	.....	1	1	1	1	.....	.....	.....	2	.....	5	1
DeSoto	7	.....	24	.....	.....	.....	.....	.....	.....	.....	5	1
Duval	102	15	100	7	.....	.....	223	.....	5	.....	133	5
Escambia	29	15	16	1	1	.....	3	.....	.....	.....	.....	3
Flagler	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin	2	1	6	.....	.....	.....	.....	.....	.....	.....	.....	1
Gadsden	3	1	27	3	5	.....	.....	1	.....	.....	.....	.....
Hamilton	1	1	2	.....	.....	.....	.....	1	.....	.....	.....	1
Hernando .....	.....	.....	11	.....	.....	.....	1	.....	.....	.....	.....	.....
Hillsborough	8	5	14	5	.....	.....	8	.....	2	.....	.....	1
Holmes	1	1	1	3	.....	.....	.....	.....	.....	.....	.....	.....
Jackson .....	.....	.....	4	4	.....	.....	.....	.....	.....	.....	.....	1
Jefferson .....	.....	3	4	3	.....	.....	.....	1	.....	.....	.....	2
Lafayette	3	1	6	1	.....	.....	.....	.....	.....	.....	.....	.....
Lake	1	.....	5	1	.....	.....	.....	.....	1	.....	12	.....
Lee	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leon	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Levy	2	.....	51	.....	.....	.....	.....	.....	.....	.....	1	.....
Liberty .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madison .....	.....	5	.....	1	.....	.....	.....	.....	.....	.....	.....	2
Manatee .....	.....	1	2	.....	.....	.....	.....	.....	1	.....	.....	1
Marion	6	1	50	8	1	.....	.....	.....	.....	.....	2	2
Monroe .....	.....	.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Nassau .....	.....	1	14	1	.....	.....	.....	2	1	.....	.....	2
Okaloosa .....	.....	2	7	.....	.....	.....	.....	.....	.....	.....	3	.....
Okeechobee .....	.....	.....	5	1	.....	.....	.....	.....	.....	.....	.....	.....
Orange	8	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Osceola .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Palm Beach .....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Pasco	1	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Pinellas	1	1	4	.....	.....	.....	.....	.....	.....	.....	.....	1
Polk	2	1	2	2	1	.....	.....	1	.....	.....	1	1
Putnam	4	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
St. Johns	7	2	1	.....	1	.....	.....	.....	.....	.....	.....	.....
St. Lucie	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Rosa	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Seminole	1	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Sumter .....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Suwannee	3	4	35	6	.....	.....	2	.....	.....	.....	4	.....
Taylor	2	.....	12	4	.....	.....	.....	.....	.....	.....	3	.....
Volusia	4	.....	2	.....	.....	.....	.....	.....	1	.....	4	1
Wakulla .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Walton	1	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington	1	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....

Other Cases Reported: Paratyphoid, 1; Typhus, 0; Asiatic Cholera, 0; Bubonic Plague, 0; Yellow Fever, 0; Leprosy, 2; German Measles, 3; Chickenpox, 8; Dengue, 1; Glanders, 0; Anthrax, 0; Rabies, 0; Tetanus, 1; Favus, 0; Beriberi, 0; Cancer 5; Epidemic

NUMBER OF CASES AND DEATHS REPORTED FOR JULY, AUGUST
AND SEPTEMBER, 1918—(Continued)

Diphtheria		Dysentery		Mumps		Pellagra		Tuberculosis		Syphilis		Gonococcus Infection		Hookworm	
Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
63	20	42	33	304	1	22	48	156	229	710	27	867	.....	62	2
1	1	3	1	.	.	.	4	3	9	.	.	1	.	.	.
4	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.
5	3	.	2	.	.	.	.	1	2	.	.	.	.	1	.
.	.	.	1	1	1	.	.	1	3	19	1	.	.	3	.
.	.	.	.	.	.	.	.	.	1	.	.	1	.	16	.
.	.	2	1	.	.	.	.	.	1	.	.	.	.	.	.
1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	.	.	1	.	.	.	1	1	1	3	.	2	.	.	.
1	1	.	.	1	.	.	.	1	2	1	.	2	.	.	.
.	.	.	.	.	.	.	.	.	2	2	.	.	.	.	.
1	.	.	1	.	.	1	2	7	12	1	.	3	.	3	.
3	.	.	.	.	.	.	1	3	1	6	.	15	.	4	.
8	.	8	2	281	.	7	8	67	44	643	9	791	.	9	.
1	1	1	1	3	.	.	3	5	9	5	2	4	.	.	.
.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
9	.	.	9	2	.	.	13	1	13	.	3	1	.	3	1
.	.	.	.	.	.	.	.	3	2	.	.	2	.	.	.
9	4	3	.	5	.	1	1	1	1	9	3	18	.	2	6
.	.	.	.	.	.	.	.	.	44	.	.	.	.	.	.
1	1	.	2	.	.	.	.	.	.	.	.	.	.	1	.
1	1	.	2	.	.	.	.	1	.	.	.	.	.	1	.
.	.	.	1	.	.	.	.	1	.	2	.	1	.	.	.
2	.	.	.	.	.	.	2	4	5	1	2	.	.	.	.
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	.	5	.	1	.	1	.	1	1	2	.	2	.	1	.
.
1	1	.	.	.	.	.	.	.	3	.	.	.	.	.	.
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.
1	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.
1	1	.	.	.	.	.	.	.	1	2	.	.	.	.	.
1	.	5	.	1	.	1	.	1	1	2	.	2	.	1	.
1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	.	.	.	.	.	.	.	.	4	1	1	.	.	.	.
1	.	.	.	.	.	.	.	.	1	1	2	.	.	.	.
1	1	.	.	.	.	.	.	.	1	.	.	1	.	1	.
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.
1	1	.	.	.	.	.	.	.	4	1	1	.	.	.	.
1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
1	1	.	.	.	.	.	.	.	1	1	.	.	.	.	.
1	1	.	.	.	.	.	.	.	5	.	1	.	.	.	.
1	1	.	.	.	.	.	.	.	3	3	.	3	.	1	.
1	1	1	.	.	.	.	.	1	7	1	.	1	.	.	.
.	.	.	.	.	.	.	.	1	6	.	.	.	.	.	.
1	.	4	.	.	.	.	.	.	.	.	.	.	.	1	.
.
.	.	.	1	.	.	.	1	.	2	.	.	.	.	1	.
.
1	1	2	.	.	.	.	2	6	6	1	1	2	.	3	.
1	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.
1	.	.	.	.	.	.	.	.	3	2	.	.	.	.	.
.
.
.
.
1	.	2	1	.	.	1	1	5	2	3	.	.	.	1	1
.
1	.	2	2	.	.	.	.	.	1	.	.	1	.	.	.

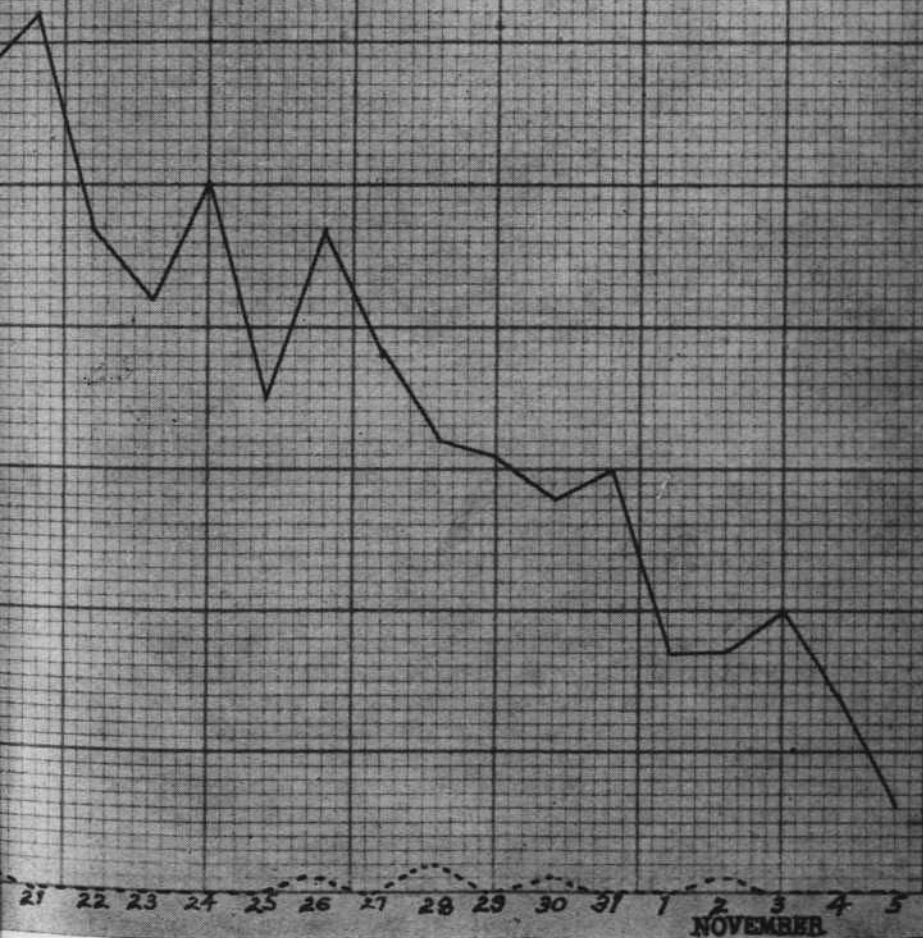
Meningitis, 10; Acute Poliomyelitis, 0; Trachoma, 4; Ophthalmia Neonatorum, 1; Pneumonia, 62; Trichinosis, 2.



COMPARISON OF YEARS
INFLUENZA-PNEUMONIA
IN 27 FLORIDA CITIES

1918 —————

1917 - - - - -



NOVEMBER

Bureau of Diagnostic Laboratories

BY B. L. ARMS, M.D., *Chief*

Has it ever occurred to those of you who are citizens of Florida that the laboratories of the State Board of Health are your laboratories and are maintained to help every one of you?

Indirectly any examination may help you, but how much more it brings it home to the individual when the examination is made for some member of his own family.

For some of you, diphtheria examinations have been made, and many of you have been protected because an examination proved that some one else had the organisms that cause diphtheria in their nose or throat and this knowledge enabled the physician to quarantine that individual, in this way protecting you and your children.

It is only by laboratory examinations that the physician can tell when it is safe to release a patient from quarantine after diphtheria as occasionally the organisms persist for some time after all clinical symptoms have cleared up. No case should be released until two successive negative cultures have been taken from both nose and throat and these cultures should be taken on different days.

It is but a few weeks since there were several cases of diphtheria in one of our cities and investigation showed all had milk from the same source. Cultures from the throat of Mr. and Mrs. X., at the dairy from which the milk was obtained, demonstrated the fact that Mr. X was a carrier of the diphtheria organisms although he was not sick nor had he any idea that he could infect others. This finding and the consequent removal of the source of infection resulted in the non-appearance of new cases.

It is quite possible that you were protected from typhoid when one of the laboratories found that John Doe, your grocer or your baker, was a carrier of the organisms that cause this disease but as you did not know this, it meant nothing to you.

Nevertheless there is one thing that you should remember and that is the State Board of Health would far rather prevent disease without your knowledge of its work than to cure a case after it has occurred.

The State has just passed through a great epidemic of influenza and if we may judge by previous outbreaks of this disease there will be many left with a cough; if you are one of these you should submit a specimen of your sputum to the laboratory, through your physician, for this is too serious to be neglected, for many cases of tuberculosis that have been quiescent have always followed such an outbreak.

The laboratories have not in the past been asked to examine a quarter of the number of sputa that should be submitted for the earlier in the disease the fact is known the better the chance for recovery, in fact, the diagnosis that is made before the tubercle

bacilli can be demonstrated in the sputum offers the best prospect for a cure. This is one reason why the laboratories do not report the results of sputum examinations to the patient for in this way much harm might be done as an individual receiving a negative report might consider that this meant no infection while a careful physical examination of the patient might reveal an early lesion and by its discovery enable the individual to overcome the infection in a comparatively short time.

On the other hand if they waited until there was a breaking down of tissue and discharge of the organisms into the air passages, which is the earliest period they can be found by the laboratory, it will require a much longer time to effect a cure and this not only makes it much more expensive both in point of time and money, but it also exposes others to the infection. The laboratories are yours—use them freely.

Bureau of Sanitary Engineering

BY GEORGE W. SIMONS, JR., *Chief Sanitary Engineer*

Soil Pollution Work

No work of greater significance confronts Floridians than the bettering of sewage disposal conditions over the entire State. During the past summer an intensive campaign was instituted by the State Board of Health which will ultimately reach every nook and corner of Florida. The plan of attack was fully detailed in the September issue of *HEALTH NOTES*.

Since August 5th weekly progress reports have been submitted to the Bureau of Engineering, by the entire field force. Up to October 12th the following work had been accomplished:

Towns visited	175
New sanitary ordinances passed.....	12
Anti-typhoid inoculations administered.....	3,500
Public addresses made.....	60
Official notifications served demanding privy reconstruction.....	2,052
PRIVIES ACTUALLY BUILT.....	2,900
House survey cards filled out.....	3,700
Condemnation of nuisances.....	230
Samples of water, milk or feces submitted for examination.....	60

The achievements to date have been most encouraging and it is gratifying to note how rapidly citizens over the State are responding to the urgent requests for better sanitation.

Comprehensive house to house surveys have been conducted in several of the towns. Data from these surveys are being compiled for general use. Towns where intensive surveys have been made are: Arcadia, Fernandina, Marianna, Callahan, Sneads, Ocala, White Springs, Jasper, Jennings, Cypress, New Smyrna, Cottondale, Brooksville, Zephyrhills and Dade City. The data being collected from the numerous completed survey cards will furnish considerable invaluable data relative to Water Supplies, Sewerage and Sewage Disposal, Refuse Collection and Disposal, General Sanitary Law and Order, Housing Conditions, etc. From the data general rural conditions in the State will be available.

Malaria Control Work

No where in Florida has the importance of Malaria Control Work been realized as much as in the territory surrounding the U. S. Government Reservation at Jacksonville. During the spring of 1918, Mr. C. N. Harrub, Sanitary Engineer of the United States Public Health Service, started extensive ditching and drainage operations in the vicinity of Camp Johnston. Since spring miles of ditches have been dug and places formerly under water and known as watering places to all the stock of the region, are now dry at all times. The work done by Mr. Harrub and his assistants has been of the highest order.

All over the State of Florida there are similar places where Malaria Control Work can be instituted. It stands in significance along with Soil Pollution work. *Every mosquito breeding place in this State can be either eliminated or else treated to such an extent that the mosquito nuisance will be greatly decreased.* The Bureau of Engineering will gladly make investigations at any place and offer suggestive plans for the eradication of mosquito breeding places. The work is very important and it is to be hoped that enterprising cities and towns will very soon awaken to the benefits of mosquito-free places.

Shipyard Sanitation

The State of Florida is today the home of a great many ship building plants. Sanitation within all yards is being regulated by the Bureau of Health and Sanitation of the United States Shipping Board and Emergency Fleet Corporation. The regulation of sanitation without the yards lies in the realm of the State Board of Health.

During the past several months the State Board of Health, Bureau of Engineering, has, in co-operation with the U. S. Public Health Service, been regulating the vending, sale and preparation of foods around shipyards. The State Board of Health at a meeting passed Rule 72, which provides for the compilation of such

rules as may be necessary to govern the sale, preparation and handling of foods in the State. As a result of this rule a number of careless, dirty and promiscuous venders or peddlers were not allowed to offer foods for sale in the vicinity of ship yards at Jacksonville. Only those venders are allowed who offer for sale food prepared under sanitary conditions and offered to the public in sanitary wrapped packages.

Bottled Waters

The sale and consumption of bottled waters is almost wholly dependent upon the belief in the purity and wholesomeness of the water. Bottled waters may show dangerous pollution originating from: (1) Contaminated wells or springs, (2) Dirty or unclean bottles, (3) Insanitary handling of the product.

Standard brands of bottled waters recently examined in our laboratory indicate that bacterial counts of such waters are sometimes excessively high following the bottling process, due mainly to the preliminary washing process and insufficient rinsing.

To keep a check on the bottled water industry of Florida and promote greater cleanliness and care in bottling establishments, Rule 69 of the State Board of Health was promulgated, requiring all bottlers of water to secure from the State Board of Health a permit to bottle and sell water in Florida, and further providing for the repulsion of such permits where deemed advisable.

Rule No. 69 reads as follows:

Rule Regulating the Manufacture, Importation and Bottling of Waters

Section 1. It shall be the duty of every manufacturer, importer, bottler or other person, firm or corporation, manufacturing, bottling or importing in the State of Florida, any artificial or natural mineral, spring or other water for drinking purposes, to file, on or before August first, 1918, and on or before each succeeding January tenth, under oath, with the State Board of Health the name of such water and the exact location from which it is obtained, together with the chemical analysis and the bacteriological examination thereof, and when manufactured the exact formula used in its production, giving qualitatively and quantitatively each and every item entering into its composition.

Sec. 2. No person, persons, firm or corporation shall manufacture or bottle mineral, carbonated, spring or natural waters in the State of Florida after August first, 1918, and after each succeeding January first, without a permit from the State Board of Health. No permit shall be required, however, where the city water supply is conducted through closed pipes and connected with a carbonated apparatus, from which it is dispensed directly to the consumer, without coming in contact with the air and not handled in any way. The State Board of Health, however, reserves the right to revoke any permit or permits at any time when, after a thorough investigation, examination and public hearing, the domestic use of the water of any person, persons, firm or corporation shall appear to it to be a menace to the public health.

Sec. 3. It shall further be the duty of every manufacturer, bottler, importer or other person, firm or corporation manufacturing, bottling or importing in the States of Florida any artificial, natural mineral, spring or other water for drinking purposes to provide the State Board of Health with two bottled samples, as prepared for sale on the market, every two months for laboratory examination as to purity.

Sec. 4. Any person, persons, firm or corporation violating any of the provisions of the above sections shall be deemed guilty of a misdemeanor and upon conviction thereof forfeit his or its permit or pay a penalty not to exceed two hundred dollars or both at the discretion of the court.

Adopted by the State Board of Health at Special Meeting at Tallahassee, Florida, April 18, 1918.

As a result of the above rule the following bottled table waters have been examined and permits granted. It will be interesting to know that FIVE BOTTLED WATERS WERE NOT ALLOWED PERMITS BECAUSE THEY DID NOT MEASURE UP TO THE STANDARD REQUIRED:

Benscot Mineral.....	Austelle, Ga.
Buffalo Mineral.....	Buffalo Lithia Springs, Va.
Clysmic	Waukesha, Wis.
Coesa	Saratoga Springs, N. Y.
Distilled Water.....	St. Augustine, Fla.
Geyser	Saratoga Springs, N. Y.
Good Hope Mineral.....	Jacksonville, Fla.
Hawthorn	Saratoga Springs, N. Y.
Laconia Springs Water.....	The Weirs, N. H.
Mountain Valley Water.....	New York, N. Y.
Poland Water.....	South Poland, Me.
Polar Water.....	St. Augustine, Fla.
Polar Water.....	Jacksonville, Fla.
Polaris	Saratoga Springs, N. Y.
Pura Water.....	Jacksonville, Fla.
Purity Springs Water.....	Tampa, Fla.
Stafford Mineral Water.....	Vossburg, Miss.
Still Rock.....	Waukesha, Wis.
Tate Springs Mineral Water.....	Tate Springs, Tenn.
Tripure Water.....	Jacksonville, Fla.
Tripure Water.....	Tampa, Fla.
Tripure Water.....	Miami, Fla.
White Rock Mineral Water.....	Waukesha, Wis.
Ideal Springs Water.....	Tampa, Fla.
Mountain Valley Springs Co.....	Hot Springs, Ark.
Perrier	Paris, France.
Celestins	France.
Orange City Mineral Water.....	Orange City, Fla.
Elder Springs Water.....	Sanford, Fla.

Water Laboratory

The water laboratory of the Bureau of Engineering has been of great value to Florida. Since January 1, 1918, more than 1,300 samples of water have been examined and their qualities passed upon. Yet this laboratory is eager to do still more work. Every city in the State should have its municipal water supply examined at least every two months, and more frequently if possible. All requests for sterile containers will be given prompt attention when received.

TAKING CULTURES FROM THE THROAT

The favored habitat for the Klebs-Loeffler Bacillus in the throat is at the base of the crypts of the tonsils. These organisms do not find free surfaces a favorable place for their growth, as such surfaces are being constantly washed with saliva, liquids which are taken by the patients as beverages, and foods. The crypt of the tonsil is a remote, out of the way pocket, and makes a most excellent hiding place for the germs of diphtheria. In many instances a physician will suspect diphtheria and take a culture from the throat of the patient, pass the culture swab over the surface of the tonsil, get a negative result, and will assume from such result that the patient did not have diphtheria. Whereas, if he had penetrated the crypts of the tonsil with a swab he might have received a positive culture.

The best crypt to take cultures from is the large one just behind the anterior pillar of the tonsil. The cotton on the end of the swab should be introduced into this crypt as far as possible, not by a pushing thrust, but with a gentle turning motion until the swab reaches the bottom of the crypt. In some instances, in large hypertrophied tonsils (which tonsils harbor the germs indefinitely) the cotton end of the swab may penetrate to the extent of an inch or an inch and a quarter into this crypt.

Taking Cultures from the Nose

In taking cultures from the nose the swab should be introduced as far back as possible. The most mistakes in nasal cultures are due to the fact that the swab is introduced into the anterior nares only to the extent of about an inch, which method is most improper and causes misleading results in cultures in that the swab has not penetrated into the nose to reach the site of the organisms, and such cultures are very apt to be negative or contaminated, because the anterior nares contains so many particles of dust.

It will be noted that the culture outfits contain two swabs, a small one and a large one, the small one being for nasal cultures. The proper method of taking a nasal culture is to introduce the small swab into the anterior nares, and slowly and gently with the index finger and thumb, and with a turning motion, turn this swab *backward* and *not* upward into the nasal cavity, and thus into the posterior nares. In fact, in most individuals the swab can be directed through the anterior nares and posterior nares as to reach the nasopharynx without drawing blood or producing any injurious effect on the mucous membranes. If this method is practiced, using great care to turn the swab and not push it, and the posterior nares is entered, if the organisms are present, such will collect on the cotton of the swab and produce growth on the media.

Inoculation of the Media

In inoculating the tube of media with the swab great care should be taken not to break the surface of the media, and there-

fore the swab should be slowly and delicately passed over the surface of the media. The tube should be so tilted back and forth as to allow the water of condensation (which is that small collection of liquid at the base of the media, usually about one-half to one cubic c. c) to pass over the surface of the swab and over the surface of the media at the same time, thereby washing the collection on the swab off on the media and moistening the surface of the media with the infected matter from the swab.

INFANTILE PARALYSIS

A prophet of old said, "My people die for lack of knowledge," and today the words of the prophet still hold good. Each mother, each father, every citizen should get knowledge, be informed on the nature, symptoms, care and prevention of Infantile Paralysis, then give their co-operation to all preventive work inaugurated in their community. In the face of an epidemic, one man or one woman, calm and well poised, is worth an army of panic-stricken individuals. Knowledge and service will form our fighting equipment and Florida must stand behind the slogan for the children of our State—"Through knowledge we serve."

THE SPITTING HABIT

Do you thoughtlessly or intentionally spit upon the sidewalks and pavements?

If so—stop it! It is a filthy and vulgar habit.

Why should you mutilate the appearance of your town?

Besides being a disgusting sight to every passer-by, this is one of the most prolific means of spreading disease germs. No one who has a degree of civic pride, or a right conception of "personal liberty" will indulge in this dangerous practice.

Many cities of Florida have an anti-spitting ordinance and policemen are authorized to arrest any person who so offends public decency.

It is to be hoped that in other places the public conscience may be aroused to such an extent that offenders may be brought to a realization of their acts and be restrained from further offense in this matter.

The State Board of Health wishes to co-operate with the people of this State against this dangerous practice and will supply placards to be placed in public places, depots, street cars and other common carriers. These placards may be had for such purposes, by addressing the State Board of Health, Jacksonville, Fla.

Surviving Fallacies

BY V. H. GWINN, M. D.

Tradition gives way but slowly and the adverse influence of past errors is still strongly felt, hence the necessity for the educational features of Public Health work getting before the public as this is one of the most important parts of State Health work. The more experienced the Public Health Officer becomes, the more he realizes the need for re-education of the public in general, and some doctors in particular, along hygienic and sanitary lines. The surviving fallacies are all the more difficult to erase or overcome, due to the fact that in many cases they contain some element of a half-truth. The sanitary significance of dirt has, no doubt, caused more loose thinking than any other topic. We are taught, instinctively, to abhor decaying organic matter, and history gives evidence of the care exercised in the disposal of putrescible matter.

Murchison, in the middle of the nineteenth century, announced his "Pythogenic Theory of Disease," which held filth to be dangerous, not as a possible vehicle of disease or a predisposing condition, but as the very source of disease. The causative agent of disease was thought to arise *de novo* out of filth. We now know that this theory is false, but it continues to have some influence. Some persons still believe, unfortunately, that diphtheria or typhoid fever may develop from decaying garbage or may be caused by sewer gas or other offensive odors.

We should endeavor to separate the truth from the error in the general condemnation of filth and differentiate between what is actually dangerous and what is merely unpleasant or mildly detrimental. Science now shows that there are many kinds of filth, some of which are extremely dangerous, such as the undisinfected excreta of typhoid or other intestinal diseases, some of which are practically harmless, a fact now recognized in the popular phrase, "good, honest dirt," and there are various degrees between the two extremes. Above all, the disease spreading open privies are especially dangerous. There are also the neglected breeding places for disease spreading flies, the stagnant water, which furnishes a breeding place for malarial mosquitoes, old out-houses harboring rats and other vermin, which are potential carriers of specific disease.

Moreover, we may say dirt is at least suspicious if not dangerous and mainly for the reason that the dangerous kinds of dirt and the innocuous kinds may be all mixed together. Usually dirty surroundings and dirty habits go together. Such facts show that filth is, generally speaking, inimical to health and is a subject for the Health Officer. There is a difficulty, however, in that there is in practice little, if any, discrimination among the different kinds of filth. That is to say, the Health Officer should recognize what

forms of uncleanness are most dangerous and attack those first. He will find that a campaign for street cleaning will result in but little as a vital factor in sanitation, while a campaign for sewers and the abolition of open privies will result in great benefit to the public in general.

The false ideas about dirt may be diverted from the more important things. We now know that personal uncleanness is the most dangerous kind of uncleanness; the people should not forget this and clamor about inadequate garbage collection, plumbing inspection, or sewer gas and foul odors such as come from fertilizer factories. Of course these odors may exert a depressing influence, and are objectionable from an esthetic viewpoint, but we no longer consider that there is any special connection between sewer gas or odors and disease.

If the child shows any indication of sickness, it should not be permitted to associate with the other children in the house, and under no circumstances should it be permitted to attend school. Its life is first; education, second.

If we are going to do our duty in preserving the health of the civil population, we must have fewer cases of sickness than ever before, because we have decidedly fewer doctors at home to take care of whatever comes up.

From Our Exchanges

HEALTH NOTES

Mary had a little cold,
It started in her head.
And everywhere that Mary went
That cold was sure to spread.

It followed her to school one day,
There wasn't any rule.
It made the children cough and sneeze
To have that cold in school.

The teacher tried to drive it out,
She tried hard, but—kerchoo-oo!
It didn't do a bit of good
For teacher caught it too.

—Yyda Allen DeVilbiss.

PARABLE OF THE SOWER UP-TO-DATE

The Story of What the Careless Person Sows Among His Fellow Beings

The following Parable of the Sower, adapted for modern conditions, is the way Dr. John W. Robertson, Chicago commissioner of health, emphasizes the need for care to prevent the spread of disease germs:

1. Behold the cougher went forth to cough.
2. And when he coughed, some germs fell upon the sidewalk, and the feet of the pedestrians came and gathered them up and carried them into their homes.
3. Some fell into nostrils that were hard and unfruitful, and forthwith a slight cold appeared. It was not worse because there was much opposition to them on account of the sterility of the soil.
4. And when the sun was up these colds were scotched, and because they had no root these colds withered away.
5. And some fell in thorny places, such as those that have an immunity, and in this wise they were choked out.
6. But others fell into good ground for them, and brought forth much disease; some a hundred-fold, some sixty-fold and some thirty-fold.
7. Who hath eyes to see let him see, and go forth to the health department and view the great harvest of pneumonia, tuberculosis, la grippe and bronchitis, all of which is of record in the archives of the department.

8. Who hath ears to hear let him hear, that over 10,000 of our people were garnered during the year of our Lord 1917 from the seed of the cougher and sneezer, and now sleep with their fathers in their untimely sepulchers.

9. Be ye not of those who, having ears, hear not, and who, having eyes, see not those things which we have herein set forth that so nearly concern their temporal health and salvation.

10. Muffle the cough, smother the sneeze and expectorate not in public places, to the end that divers and grievous disorders come not unto thee, nor unto thy neighbor.

11. And remember now the teachings of the health department that thy days may be long in the land which the Lord, thy God, giveth thee.

HEALTH RULES

MORNING—Up smiling—Hustle—Wash—Clean teeth.

MEALTIME—Wash hands and face—Drink plenty of water.

SCHOOL—Sit and stand erect—Get plenty of fresh air.

PLAYTIME—Do not cough or sneeze near another person.

EVENING—Clean up each night—Bathe frequently.

SLEEP—Ten hours every night—Windows open wide.

—*Kansas State Board of Health, Topeka.*

The human body is able to take care of itself, if given a chance. This means obedience to simple rules—plenty of fresh air, especially at night; sunlight in the home, especially in the sleeping rooms; plenty of sleep, plenty of good, simple, wholesome food—a bath when needed, which means every day, and exercise and recreation.

THE LOW COST OF HEALTH

We hear very much of the high cost of living, but we overlook the fact that many of the best things of life can be had for nothing.

It costs nothing to stand up and walk and breathe properly.

Fresh air in the home is free.

No expense to taking a few simple exercises every morning.

It costs nothing to chew the food thoroughly.

It costs nothing to select the food best suited to the body.

It costs nothing to clean the teeth twice a day.

It costs no more to stop using patent medicines.

It costs no more to read good books than trashy literature.

It costs nothing to have a cheerful, happy disposition, and stop having grouches.

These things cost nothing, yet they will bring content and reduce the doctor's bill to nothing a year—For You.—*Toronto Bulletin.*

HOW TO RECOGNIZE CONTAGIONS

Whooping Cough

Begins like cold in the head, with bronchitis and sore throat, and a cough which is worse at night. Symptoms may at first be very mild. Characteristic "whooping" cough develops in about a fortnight, and the spasm of coughing often ends with vomiting.

Measles

Begins like cold in the head, with feverishness, running nose, inflamed and watery eyes, and sneezing; small groups of mulberry-tinted spots appear about the third day; rash first seen on forehead and face. The rash varies with heat; may almost disappear if the air is cold, and come out again with warmth.

Scarlet Fever

The onset is usually sudden, with headache, languor, feverishness, sore throat, and often vomiting. Usually within twenty-four hours the rash appears and is finely spotted, evenly diffused, and bright red. The rash is seen first on the neck and upper part of chest, and lasts three to ten days, when it fades and the skin peels in scales, flakes, or even large pieces. The tongue becomes whitish, with bright red spots. The eyes are not watery or congested.

Diphtheria

Onset insidious, may be rapid or gradual. Typically sore throat, great weakness and swelling of kernels in the neck, about the angle of the jaw. The back of the throat, tonsils, or palate may show patches like pieces of grayish-white kid. The most pronounced symptoms are great debility and lassitude, and there may be little else noticeable. There may be hardly any symptoms at all.

Smallpox

The illness is usually well marked and the onset rather sudden with feverishness, severe backache, and sickness. About third day a red rash of shotlike pimples, felt below the skin, and seen first about the face and wrists; spots develop in two days later, then form little blisters and after two days more become yellowish and filled with matter. Scabs then form which fall off about the fourteenth day.

GOOD HEALTH IS PRICELESS

Every good citizen awake to his best interest should take a keen interest in the health status of the community. There is nothing more intimately affecting individual and family welfare than the maintenance of healthful surroundings. The health of a community is the combined health of those living in it. It should be of interest to every individual, for upon it depends the welfare of himself and family and of his fellow citizens. Where proper sanitary methods are enforced, there is no outbreak of disease which cannot be successfully controlled. Much has already been done by sanitation but it is only a beginning and the great victory over preventable disease is to be won through the aid of an educated and enlightened public.

There is no time to lose in preparing against the spread of disease. Our happiness and our national strength in our army, navy, on the farms, and in industrial plants, all depend upon our health. Without it, victory cannot be ours.

The degree of care that we take of our health will be a measure of our loyalty to our nation.

Are you ready and willing to spend the money to preserve the health and lives of young and old? The first step should be taken in the school.

Education is of little use to the sick or dead. Parents and teachers should remember that health comes first. Without proper health, no child can be properly educated.

HERE'S TO HOOVER AND HEALTH!

Potato Service

Eat potatoes and save wheat. Potatoes help to keep the blood alkaline. The tendencies of the average diet are acid forming. Bake the potato and eat the skin, but in the excitement of eating the skin do not forget the pulp.

RULES AND REGULATIONS OF THE FLORIDA STATE BOARD OF HEALTH, GOVERNING MORBIDITY REPORTS

Sec. 1.—It being the duty of the State Board of Health to keep currently informed of the occurrence, geographic distribution and prevalence of the preventable diseases throughout the State, and to prevent the spread of these diseases, and for that purpose the following Rules are adopted in accordance with power conferred on the State Board of Health, as provided by Chapter 6892 (No. 86), Laws of 1915.

Sec. 2.—The following named diseases and disabilities are hereby declared to be dangerous to the public health and made notifiable, and the occurrence of cases shall be reported as herein provided:

GROUP 1—COMMUNICABLE DISEASES

Anthrax	Mumps
Chancroid	Ophthalmia Neonatorum (conjunctivitis of new-born infants).
Chicken-pox	Paratyphoid Fever
Cholera, Asiatic (also cholera nostras when Asiatic Cholera is present or its importation threatened).	Plague
Dengue	Pneumonia (Acute)
Diphtheria	Poliomyelitis (Acute Infectious)
Dysentery:	Rabies
(a) Amoebic	Scarlet Fever
(b) Bacillary	Smallpox
Favus	Syphilis
German Measles	Tetanus
Glanders	Trachoma
Gonococcus	Trichinosis
Hookworm Disease	Tuberculosis (all forms, the organ or part affected in each case to be stated)
Leprosy	Typhoid Fever
Malaria	Typhus Fever
Measles	Whooping Cough
Meningitis:	Yellow Fever
(a) Epidemic Cerebrospinal	
(b) Tuberculous	

GROUP 2—MISCELLANEOUS DISEASES

Beriberi	Cancer	Pellagra
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Provided, That the State Board of Health may from time to time, in its discretion, declare additional diseases notifiable and subject to the provisions of these Rules and Regulations.

BE THE FELLOW THAT YOUR MOTHER
THINKS YOU ARE

While walking down a crowded city street the other day,
I heard a little urchin to a comrade turn and say:
"Say, Jimmie, don't yer know I'd be happy as a clam,
If I only was de feller dat me mudder t'inks I am.

"She t'inks I am a wonder, and knows her little lad
Would never mix wit' nothin' dat was ugly, mean or bad.
I often sit and t'ink how nice 'twould be—gee whizz,
If a feller was de feller dat his mudder t'inks he is."

So, folks, be yours a life of toil or undiluted joy,
You still can learn a lesson from the small, unlettered boy;
Don't try to be an earthly saint, with eyes fixed on a star—
Just try to be the fellow that your mother thinks you are.

—*Noodles Fagon.*

FLORIDA HEALTH NOTES



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"Militarists tell us that the first line of defense of a country is in the navy and that the second line is in the coast line fortifications and that its third line of defense is in the army. I deny that. The first line of defense of this or any other country is the children of the country, and if by an appropriation or any amount of money there can be built up in this country a strong active, fighting race of men and women who are able to take care of themselves, that money, in my judgment, will be well and economically expended."

FLORIDA HEALTH NOTES

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STATE BOARD OF HEALTH OF FLORIDA

HON. CHARLES T. FRECKER, President, Tampa
HON. ED. M. EARNEST Palatka
HON. J. E. GRAVES DeFuniak Springs

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LABORATORIES

Jacksonville	Tampa	Pensacola
	Miami	

THE Laboratories of the State Board of Health have been established for the purpose of giving aid to the people of this State, through physicians, by making investigations and reporting findings which may be of assistance in diagnosing diseases. There is no charge for this service. It is performed gratuitously. Physicians and surgeons in need of laboratory service are earnestly urged to make use of the facilities offered by the laboratories of the State Board of Health of Florida.

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THE value of Health Notes may be greatly increased if physicians and nurses will aid in causing it to be placed in the hands of parents to whom such information as it contains may be useful. Copies will be mailed to any address upon request.

Foreword

The State Board of Health was duly represented at the American Public Health Association held in Chicago, December 9th to 12th, 1918. The influenza epidemic was made the most important subject for discussion and more was said about influenza than any other one subject, and by the most prominent men in the United States and Canada. Much was learned concerning the nature of influenza and much remains to be determined.

Influenza may be expected to prevail throughout the United States during this winter and probably longer. On the basis of the best data available, it is estimated that there were about four hundred thousand deaths from epidemic influenza in the United States during the months of September, October and November, 1918.

A recrudescence has not been unexpected. Already a serious recurrence of the disease has been noted in North and West Florida, and later recurrences are to be expected. We believe from the best information obtainable, that restrictive measures have their chief value in preventing the development of enough cases at any one time to paralyze a community and in reducing the death rate, rather than actually preventing the development of a given total of cases in the entire epidemic.

It has been estimated that in the course of an influenza epidemic 40 per cent. of the population on an average will have the disease. The longer the period over which this case total can be distributed in any community, the greater

will be the ability of District Health Officers, local health officers and physicians to handle the situation.

Among the points agreed upon by the best health authorities and scientists who have devoted much time and attention to this subject, are the following: Compulsory reporting, wide-spread publicity and education, recognized administrative procedure, closing, prevention or limitation of gatherings, or at least proper restrictions, especially prohibiting non-essential gatherings.

A committee of the American Public Health Association was appointed and charged with the duty of preparing a provisional working formula, based upon facts and opinions gathered from the papers and discussions at the meeting. We think it of sufficient importance to the people of Florida to print the committee's findings in full in this issue of Health Notes.



The Committee's Report

The present epidemic is the result of a disease of extreme communicability. So far as information available to the committee shows, the disease is limited to human beings.

The micro-organism or virus primarily responsible for this disease has not yet been identified. There is, however, no reason whatsoever for doubting that such an agency is responsible for it. Mental conditions may cause one to believe he has influenza when he has not, and may make the patient who has the disease suffer more severely than he otherwise would. No mental state alone, however, will cause the disease in one who is not infected by the organism or virus that underlies the malady.

While the prevailing disease is generally known as influenza, and while it will be so referred to in this statement, it has not yet been satisfactorily established that it is the identical disease heretofore known by that name, nor has it been definitely established that all preceding outbreaks of disease styled at the time "influenza" have been outbreaks of one and the same malady.

There is no known laboratory method by which an attack of influenza can be differentiated from an ordinary cold or bronchitis or other inflammation of the mucous membranes of the nose, pharynx, or throat.

There is no known laboratory method by which it can be determined when a person who has suffered from influenza ceases to be capable of transmitting the disease to others.

Laboratories are necessary agencies for the supervision and ultimate control of the disease. The research laboratory is necessary for the discovery of causative micro-organism or virus, and for discovery of some practicable method for the propagation of a specific vaccine and a curative serum. Clinical laboratories are necessary for the supervision and control of such vaccines and sera as may be used from time to time for the prevention of the disease and for therapeutic purposes, and for the information such laboratories can give to health officers and physicians as to such variations in the types of infective micro-organisms, as occur during the progress of an epidemic.

Deaths resulting from influenza are commonly due to pneumonia resulting from an invasion of the lungs by one or more forms of streptococci, or by one or more forms of pneumococci, or by the so-called influenza bacillus, or bacillus of Pfeiffer. This invasion is apparently secondary to the initial attack.

Evidence seems conclusive that the infective micro-organism or virus of influenza is given off from the nose and mouth of infected persons. It seems equally conclusive that it is taken in through the mouth or nose of the person who contracts the disease, and in no other way, except as a bare possibility through the eyes, by way of the conjunctivae or tear ducts.

PREVENTION

If it be admitted that influenza is spread solely through discharges from the noses and throats of infected persons finding their way into the noses and throats of other persons susceptible to the disease, then no matter what the causative organism or virus may ultimately be determined to be, preventive action logically follows the principles named below and, therefore, it is not necessary to wait for the discovery of the specific micro-organism or virus before taking such action.

I. Break the channels of communication by which the infective agent passes from one person to another.

II. Render persons exposed to infection immune, or at least more resistant, by use of vaccines.

III. Increase the natural resistance of persons exposed to the disease, by augmented healthfulness.

I. *Breaking the channels of communication:*

(a) By preventing droplet infection. The evidence offered indicates that this is of prime importance.

(b) By sputum control. The evidence offered indicates that the danger here is due chiefly to contamination of the hands and common eating and drinking utensils.

(c) By supervision of food and drink. Evidence offered does not indicate much danger of infection through these channels.

Details and practical methods possible for the limitation of infection droplets, sputum, and food and drink are discussed later under special preventive methods.

II. *Immunization and vaccines.*

In the present epidemic vaccines have been used to accomplish:

1. The prevention or mitigation of influenza *per se*.

2. The prevention or mitigation of complications recognized as due to the influenza bacillus or to various strains of streptococci and pneumococci.

In relation to the use of vaccines for the prevention of influenza, the evidence which has come to the attention of the committee as to the success or lack of success of the practice is contradictory and irreconcilable. In view of the fact that the causative organism is unknown, there is no scientific basis for the use of any particular vaccine against the primary disease. If used, any vaccine must be employed on the chance that it bears a relation to the unknown organism causing the disease.

The use of vaccines for the complicating infections rests on more logical grounds, and yet the committee has not sufficient evidence to indicate that they can be used with any confident assur-

ance of success. In the use of these vaccines the patient should realize that the practise is still in a developmental stage.

The committee believes that when vaccines are used experimentally for the purpose of determining their preventive or curative value, the following conditions should be complied with:

1. The groups of vaccinated and unvaccinated persons should be the same in number.
2. The relative susceptibilities of the two groups should be equal, as measured by age and sex distribution, previous exposures to infection without development of influenza and a previous history as to recent attacks of the disease.
3. The degree of exposure in each group should be practically the same in duration and intensity.
4. The groups should be exposed concurrently during the same stage of the epidemic curve.

III. *Increased natural resistance of persons exposed to infection.*

Physical and nervous exhaustion should be avoided by paying due regard to rest, exercise, physical and mental labor and hours of sleep. The evidence is conclusive, however, that youth and bodily vigor do not guarantee immunity to the disease.

The nature of the preventive measures practicable and necessary in any given community depends in a large part upon the nature of the community itself, as to population characteristics, industries, and so on, and upon the stage and type of the epidemic curve. For example, the measures to be adopted in a purely rural community would not be practicable or desirable in a large metropolitan area, nor would the measures desirable and feasible at the beginning or end of an epidemic be found those best adapted for the intervening period. The committee has found it impossible, therefore, to lay down any rules for the guidance of all health officials alike in preventive measures. The most it has been able to do has been to state certain general principles that in its judgment should underlie administrative measures for the prevention of influenza. The application of these principles to the needs of any particular community must be left for determination by the officers of that community who are responsible for the protection of its public health.

The preventive measures recommended by the committee are as follows:

- A. Efficient organization to meet the emergency, providing for a centralized co-ordination and control of all resources.
- B. Machinery for ascertaining all facts regarding the epidemic:
 1. Compulsory reporting.
 2. A lay or professional canvass for cases, etc.
- C. Widespread publicity and education with respect to respira-

tory hygiene, covering such facts as the dangers from coughing, sneezing, spitting, and the careless disposal of nasal discharges; the advisability of keeping the fingers and foreign bodies out of the mouth and nose; the necessity of hand-washing before eating; the dangers from exchanging handkerchiefs; and the advantages of fresh air and general hygiene. Warnings should be given regarding the danger of the common cold, and possibly cold should be made reportable so as to permit the sending of follow-up literature to persons suffering from them. The public should be made acquainted with the danger of possible carriers among both the sick and the well and the resultant necessity for the exercise of unusual care on the part of everybody with respect to the dangers of mouth and nasal discharges.

D. Administrative procedures:

1. There should be laws against the use of common cups, and improperly washed glasses at soda fountains and other public drinking places, which laws should be enforced.

2. There should be proper ventilation laws, which laws should be enforced.

Since the disease is probably largely a group or crowd problem, the three following sub-heads are especially important.

3. *CLOSING*.—Since the spread of influenza is recognized as due to the transmission of mouth and nasal discharges from persons infected with influenza, some of whom may be aware of their condition but others unaware of it, to the mouths and noses of other persons, gatherings of all kinds must be looked upon as potential agencies for the transmission of the disease. The limitation of gatherings with respect to size and frequency, and the regulation of the conditions under which they may be held must be regarded, therefore, as an essential administrative procedure.

Non-essential gatherings should be prohibited. Necessary gatherings should be held under such conditions as will insure the greatest possible amount of floor space to each individual present, and a maximum of fresh air, and precautions should be taken to prevent unguarded sneezing, coughing, cheering, etc.

Where the necessary activities of the population, such as the performance of daily work and earning of a living, compel considerable crowding and contact, but little is gained by closing certain types of meeting places. If, on the other hand, the community can function without much of contact between individual members thereof, relatively much is gained by closing or preventing assemblages.

Schools: As to the closing of schools there are many questions to be considered.

- (a) Theoretically, schools increase the number and degree of contacts between children. If the schools are closed, many of the contacts which the children will make are likely to be out of doors. Whether or not closing will decrease or increase

contacts must be determined locally. Obviously, rural and urban conditions differ radically in this regard.

(b) Are the children in coming to and going from school exposed to inclement weather or long rides in overcrowded cars?

(c) Is there an adequate nursing and inspection system in the schools?

(d) Is it likely that teachers, physicians and nurses can really identify and segregate the infected school child before it has an opportunity to make a number of contacts in halls, yards, rooms, etc.? We suggest that children suspected of having influenza and held in school buildings for inspection should be provided with and required to wear face masks.

(e) Will the closing of schools release personnel or facilities to aid in fighting the epidemic?

(f) If schools are kept open, will the absence of many teachers lower the educational standards?

(g) If a number of pupils stay at home because of illness or fear, will they not constitute a heavy drag upon their classes when they return?

(h) If schools are closed, is there likely to be an outbreak in any case when they are reopened?

Churches: If churches are to remain open, services should be reduced to the lowest number consistent with the adequate discharge of necessary religious offices, and such services as are held should be conducted in such a way as to reduce to a minimum, intimacy and frequency of personal contact.

Theaters: As regards theaters, movies, and meetings for amusement in general, it seems unwise to rely solely or in great part upon the ejection of careless coughers. In the first place it is difficult to determine who is a careless cougher, and after each cough, danger has already resulted. It seems, too, that the closing of theaters may have as much educational value as their use for direct educational purposes, etc. Discrimination as to closing among theaters, movies, etc., on the basis of efficiency of ventilation and general sanitation, may be feasible.

Saloons, etc.: The closing of saloons and other drinking places should be decided upon the basis of the probability of spread of the disease through drinking utensils and the conditions of crowding.

Dance halls, etc.: The closing of dance halls, bowling rooms, billiard parlors and slot-machine parlors, etc., should be made effective in all cases where their operation causes considerable personal contact and crowding.

Street cars, etc.: Ventilation and cleanliness should be insisted upon in all transportation facilities. Overcrowding should be discouraged. A staggering of opening and closing hours in stores and factories to prevent overcrowding of transportation facilities may

be cautiously experimented with. In small communities where it is feasible for persons to walk to their work it is better to discontinue the service of local transportation facilities.

Funerals: Public funerals and accessory funeral functions should be prohibited, being unnecessary assemblies in limited quarters, increasing contacts and possible sources of infection.

4. *MASKS.*—The wearing of proper masks in a proper manner should be made compulsory in hospitals and for all who are directly exposed to infection. It should be made compulsory for barbers, dentists, etc. The evidence before the committee as to beneficial results consequent upon the enforced wearing of masks by the entire population at all times was contradictory, and it has not encouraged the committee to suggest the general adoption of the practise. Persons who desire to wear masks, however, in their own interests, should be instructed as to how to make and wear proper masks, and encouraged to do so.

5. *ISOLATION.*—The isolation of patients suffering from influenza should be practised. In cases of unreasonable carelessness, it should be legally enforced most rigidly.

6. *PLACARDING.*—In cases of unreasonable carelessness and disregard of the public interests placarding should be enforced.

7. *HOSPITALIZATION.*—The theory of complete hospitalization is that, if all the sick were hospitalized the disease would be controlled. In certain somewhat small communities where hospitalization of all cases was promptly inaugurated the disease did come quickly under control. It must be recognized, however, that unless every infective person can be detected and identified as such and removed to the hospital before he has infected others, hospitalization can not be depended upon to eliminate the disease.

In general, home treatment is to be advocated where medical, nursing and other necessary facilities are adequate, and where home treatment is not directly contra-indicated by the danger of infecting others. The hospitalization in any case, mild or severe, should be undertaken only when facilities for home treatment are inadequate with respect to medical and nursing care or otherwise. The objection to routine hospitalization of mild cases lies in the fact that patients not already suffering from secondary infections may acquire them by exposure to hospital cases already so infected. The objection to the routine hospitalization of severe cases lies in the danger to the patient necessarily incident in the transfer from home to the hospital.

8. *COUGHING AND SNEEZING.*—Laws regulating coughing and sneezing seem to be desirable for educational and practical results.

9. *TERMINAL DISINFECTION.*—Terminal disinfection for influenza has no advantage over cleaning, sunning and airing.

10. *ALCOHOL*.—The use of alcohol serves no preventive purpose.

11. *SPRAYS AND GARGLES*.—Sprays and gargles do not protect the nose and throat from infection, for the following reasons:

(a) So far as the knowledge of the committee extends, no germicide strong enough to destroy infective organisms can be applied to the nose and throat without at the same time injuring the mucous membranes.

(b) Irrigation of the nose and throat to accomplish the complete mechanical removal of the infective organism is impracticable.

(c) Their use tends to remove the protective mucus, to spread the infection and to increase the liability of actual entrance of the infective organisms.

(d) Their domestic use is liable to lead in families to a common employment of the same utensils.

(e) The futility of sprays and gargles has been demonstrated with respect to certain known organisms such as the diphtheria bacillus and the meningococcus.

MISCELLANEOUS CONSIDERATION

1. Colleges, asylums and similar establishments may with advantage enforce rigid institutional quarantine against the outside world, if they begin in the early stage of an epidemic, provided they are so located and conducted as to render the procedure reasonably likely to be effective, even temporarily; for even temporary success will postpone the appearance of the disease, if it appears at all, to a time when the patients will be more likely to be able to have adequate medical and nursing care.

2. The recommended measures for control, even if they do not accomplish the desired end, should at least be instrumental in distributing the epidemic over a longer period of time, which in itself is highly desirable.

3. The statistics of the disease and the keeping of proper records are extremely important. The lack of knowledge regarding innumerable factors in reference to the disease makes all the more desirable complete case records, etc.

4. The committee wishes to emphasize the need for the complete statistical study of the collected data on the mortality, morbidity, case fatality, duration, economic aspects, and therapeutics of the disease. Through the collection of the facts in a uniform manner, and through the analysis of such tabulated data, especially mathematical graduation, and testing and study of the figures, important contributions to the natural history and typical characters of the disease may be expected. General principles as to the etiology, fatality and practical management of influenza may follow from the extensive survey of the epidemic in the statistical lab-

oratory as well as from the intensive bedside observation of single cases of the disease.

5. The measures recommended are calculated to be effective in the promotion of respiratory hygiene in general and particularly in the control of pneumonia and other respiratory infections.

ADMINISTRATIVE MEASURES FOR RELIEF

The committee on administrative measures for relief would submit the following considerations as constituting a summary of the important measures for meeting epidemic conditions:

I. *General Rules.*

1. Compulsory reporting.
2. Isolation, by co-operation and education, to a point where it does not diminish the willingness of the physician to report.
3. Placarding would seem to be subject to the same limitations as is isolation.
4. The closing of schools, prohibition of funerals, etc., being preventive measures, are not touched upon in this report, except to mention that the closing of many agencies will release medical, nursing and volunteer services for special influenza work.
5. It may be necessary to grant authority and power to the health authorities to administer relief.

II.—*Preliminary Measures.*

1. The listing and distribution of resources, including physicians, nurses, social workers, nurses aids, clerks, domestics, laundresses, automobiles, chauffeurs, mask makers and volunteers of all kinds.

All available publicity channels should be used to promote volunteer service.

An appeal should be made for voluntary donors of human blood serum from convalescent influenza patients, to be held in readiness for use in treatment.

2. The centralization of resources, under one control, with central and branch headquarters, the city being districted for medical, nursing and other work.

The central headquarters should be ordinarily under the supervision of a board representative of the most important agencies concerned, the board's work to be administered through a manager (presumably the health officer) selected for his fitness.

3. The service should be maintained on a 24-hour basis, and a system of outgoing and incoming telephone service is essential.

4. The local authorities should get and keep in touch with state and national agencies.

III. *Current and Continuous Analysis of Case Situation.*

1. In the smaller communities a canvass should be made of all physicians, soliciting information as follows:

- (a) Number of cases under care.
- (b) Number of cases needing hospital treatment.
- (c) Number of cases needing home nursing care.
- (d) Number of cases requesting medical service but not reached.

This information will indicate the situation as regarding the need for emergency nursing and medical service, and should be acquired as fully as possible in larger communities, through various agencies such as a current lay or police canvass of homes, etc. The continuous classification of cases according to these groupings is of practical value.

IV. *Analysis, Augmentation and Organization of Principal Facilities.*

(A) *Field Nursing.*

1. Ordinarily nursing facilities utilized in general public health work should be diverted to meet the epidemic situation, and should be used on a district basis, with all other available facilities, under one supervision.

2. Nursing assistants, volunteers, etc., should be used where ever possible in homes and institutions, under expert supervision, after classification and assignment on a basis of minimum standards as to fitness, and such intensive training in the care of influenza and pneumonia patients as may be feasible.

3. From the standpoint of the patient, home treatment is to be advocated, if medical, nursing, disease preventive and other facilities are adequate.

4. Restriction so far as possible through the pressure of public opinion should be brought against the unnecessary use of private nurses.

5. Automobile transportation should be provided, and the nursing service used to encourage isolation and education.

6. Special record forms are essential for this and the medical work, and a special sub-committee is proposed to meet this problem.

7. Provision as to housing and care should be made for out of town nurses.

8. We recommend further training with reference to influenza for all graduates of Red Cross Home nursing courses and more extensive use of their services. This would necessitate frequent and careful registration (names, addresses and telephone numbers) and further information regarding personal health, age and ability and willingness to serve.

(B) Emergency Medical Service.

1. The medical service should be handled through the central office, the physicians being responsible to the central office, though perhaps assigned to district offices.

2. In this emergency service there should be utilized all available physicians such as school and factory physicians, volunteers, practitioners on a paid basis, fourth year medical students, etc. This service should cover all calls reported as unreached by private physicians or received through other channels, and should be co-ordinated with the special nursing service, being provided with automobile transportation, machines being hired if necessary.

3. The emergency medical service should be used to select cases needing hospital care.

4. It may be feasible to institute a central clearing house in certain districts for private physicians calls.

5. An arrangement should be made through the medical licensing board for the granting of temporary permits to practice to reputable physicians from out of the state, at the request of the Central Influenza Committee.

6. In some localities it may be feasible to district the local practitioner and to have him meet special calls on a part time basis for adequate compensation.

7. Certain of the relatively non-essential specialties should be discouraged, and the physicians in those specialties urged to volunteer for emergency district work. This type of service may be operated on a pay or free basis.

8. Presumably some effort should be made, through an authoritative medical commission, to suggest standard methods of treatment; and wise limitations as to therapeutic procedure.

(C) Hospital Facilities.

1. It is essential that the facilities, if possible, be kept ahead of the demand. A daily canvass should be made and data collected regarding available beds, medical and nursing needs, domestics, food, cots, supplies, etc. A regular visit by an inspector will probably prove more effective than an attempt at telephone communication.

2. Under most conditions a central clearing house, covering most if not all of the hospitals, is advisable for the admission of cases. Through this channel the severer cases may receive first consideration. Owing to constant changes in the hospital bed situation, the daily canvass of facilities may not be wholly depended upon; on the contrary, it may usually be necessary to telephone the hospital in order to make sure regarding the admission of a particular case. In any event the hospitals, if facilities are inadequate, should be impressed with the necessity for admitting only the most severe or needy cases, pay or free. Special hospital arrangements should be provided for pregnant women.

3. It is advisable to add wards or tents or new equipment to existing institutions rather than to establish entirely new emergency hospitals. If practicable, certain hospitals may be urged to handle influenza cases exclusively.

4. Non-emergency surgical and chronic medical cases amenable to home treatment should be dehospitalized.

5. A convalescent home, if adjacent to the hospital, may serve for the care of mild and convalescent cases, thereby increasing the space in the hospital for acute cases, obviously involving an increase in the nursing facilities.

6. A canvass of ambulance facilities should be made, ambulances being requisitioned with payment, or hired by contract, if necessary. Automobiles and motor trucks should be potentially mobilized for this purpose. Frequently military equipment may be used if accessible.

V. Social and Relief Measures.

1. The central office should keep the family advised regarding the patient, thereby saving telephone calls, trolley fares and worry on the part of the family, and thereby increasing the willingness for hospitalization.

2. Volunteer workers such as Red Cross volunteers, teachers, relatives, etc., should be placed in care of families where the responsible members are dead or hospitalized, this service being under expert social supervision, and the families in touch with the supply system. Supervision of placed-out children is also necessary.

3. Homes should be investigated before patients are discharged into them, when destitution or other untoward circumstances are apparent.

4. Precaution should be taken that institutions and families too busy with the influenza situation to look after their own needs, are covered by the general relief measures.

5. Ordinary charitable relief should be handled through the routine agencies, the service co-ordinated with the other epidemiological measures. Churches, lodges, etc., should be urged to handle their own cases, in order to relieve the pressure on the central agency. Aid should be immediate, without protracted investigation.

6. Recreation facilities (motoring, etc.) should be provided for the physicians and nurses while off duty.

VI. Food.

1. Available central cooking facilities should be used so far as is necessary, such as the dietetic equipment in high schools, normal schools, colleges, etc., with a delivery system to families and institutions in need.

2. Individual families should be encouraged to cook additional amounts, the same to be delivered to central diet kitchens for distribution, a standard list of prepared foods needed being devised

and advertised, with recognition of racial customs and preferences.

3. It may be necessary to establish canteens in sections of the city.

VII. *Laundry.*

1. A special collection and distribution system may be essential both for homes and institutions.

2. It may be necessary to take over a public laundry with compensation, or a private non-medical institution laundry.

VIII. *Provision for Fatalities.*

1. Death reporting should be prompt (24-hours) and a record kept so as to insure prompt disposal of bodies.

2. A daily canvass of available coffins should be made, labor assured for construction, and possibly no coffins sold without the permit of the Influenza Administration Office.

3. If morgue facilities are inadequate a central place should be provided, with embalming facilities, for the temporary disposal of bodies.

4. A canvass of hearses should be made and regulations issued prohibiting unnecessary long hauls, insisting on maximum capacity loads, etc. A central control will prevent unnecessary duplication as to routes, etc.

5. A reserve supply of trucks and automobiles should be at hand for use in various ways in connection with the handling of fatal cases.

6. The number of graves required should be estimated and labor released from public works or secured through other channels (possibly military) for digging. Possibly temporary trench interment may be necessary.

IX. *Education, Instruction and Publicity.*

Literature and special instructions will be necessary on many phases, including the following:

1. Instructions to physicians as to reporting, facilities available, district arrangements, etc.

2. Advice to physicians regarding treatment standards and suggestions.

3. Instructions for families, to be distributed by nurses, physicians, social workers, druggists, etc., covering the problems of care during the physician's absence.

4. Instructions to the public as to where aid may be secured, to be printed in various languages, and distributed by druggists, displayed in street cars, used in the press, etc.

5. Instructions for families on "What to do till the doctor comes."

6. Instructions to physicians, factory managers, school superintendents, etc., urging the necessity for immediate home and bed treatment at the first sign of respiratory disease.

7. Popular literature on the essentials of adequate care, the danger of returning to work too soon, etc. Popular press space is worth paying for, if it cannot be secured otherwise.

8. Popular publicity as to legitimate medical, nursing, undertaker, drug and other charges, to prevent profiteering.

X. *Miscellaneous.*

1. The co-operation of pharmaceutical agencies should be secured to insure an adequate supply of drugs and druggists.

2. Influenza victims and their families should have "first call" on fuel deliveries.

3. While follow up procedures are not legitimately a factor in the epidemic situation, their consideration is essential to an adequate meeting of the entire problem. This means adequate provision for medical examination and nursing care, relief measures, industrial employment problems, the follow up of special sequelae such as cardiac affections, tuberculosis, etc.

4. It is finally suggested that Health Department draw up a program based on the above outline, holding it in reserve for future use, if not immediately needed, and modifying the proposal to fit the size and other characteristics of the particular community.

THE BACTERIOLOGY OF THE 1918 EPIDEMIC OF SO-CALLED INFLUENZA

The epidemic disease known as influenza is believed to be due to an undetermined organism which causes an infection that lowers the resistance of the body as a whole, and of the respiratory organs in particular. This allows the invasion of other pathogenic micro-organisms. The most important complicating infections are due to the influenza bacilli, different strains of pneumococci and different varieties of streptococci. Some careful observers regard certain of these organisms as the primary cause.

In each case, one or several of these micro-organisms may be present. In different portions of the country the dominating variety of organism has been found to differ.

VACCINES

Assuming that the cause of the epidemic is an unknown virus, it does not seem possible at present to prevent the primary disease by vaccination with known organisms. Against the secondary infections, there would seem to be a theoretical basis for the use of vaccines, and especially for the use of vaccines prepared from organisms responsible for complications which may differ in various localities at various times. This variable bacterial flora may militate against the practical application of vaccination on a large scale, because it would seem to require frequently repeated vaccinations with the flora that may be met with. It is impossible at pres-

ent to evaluate the reports from the use of these vaccines adjusted to meet local conditions. More data obtained under carefully controlled conditions are needed.

Stock vaccines made from the influenza bacillus alone or from other bacteria, have been used to considerable extent.. The injections of stock vaccines have seemed to mitigate to some degree some outbreaks of influenza and also the severity of the complicating infections; but in those instances in which the results of the use of vaccine have been controlled, no appreciable results have been obtained. The fact that the vaccine is usually employed after the epidemic has broken out and is perhaps on a decline, and the fact that an unknown number of people have been exposed, make it very difficult to draw conclusions as to its efficacy.

RECOMMENDATIONS

Your committee recommends that until such time as the efficacy, or the lack of efficacy, of prophylactic vaccination against influenza is established, vaccine if used, should be employed in a controlled manner, under conditions that will allow a fair comparison of the number of cases and of deaths among the vaccinated and non-vaccinated groups. Particular attention should be directed to securing data as to the period in the epidemic at which vaccinated and non-vaccinated persons developed the disease.

Your committee is of the opinion that the indiscriminate use of stock vaccines against influenza and influenza and pneumonia cannot be recommended.

Nothing in these recommendations should be interpreted as discouraging the use of a pneumococcus stock vaccine against lobar pneumonia.

This epidemic emphasizes the importance of properly equipped laboratories.

HISTORY AND STATISTICS OF THE EPIDEMIC

Your sub-committee wishes to say that in view of the fact that the historical and other data of the epidemic are still in process of collection, no positive statement can be made at the present time on the precise incidence of the disease in the American population. On the basis of the best data available your sub-committee estimates that there were not less than 400,000 deaths from the disease in the United States during the months of September, October and November, 1918. The major portion of this mortality occurred at ages 20-40, when human life is of the highest economic importance. We would suggest that this sub-committee be authorized to cooperate with the special committee on statistical study of the epidemic of the section on Vital Statistics of this Association, and that the data collected through that latter special committee be reported through the sub-committee on history and statistics of the

epidemic to the general reference committee on the influenza epidemic. Standard forms for purposes of statistical tabulation, analysis and graphic presentation will be submitted in a supplementary report at an early date.

SUGGESTIONS

In view of the probability of recurrences of the disease from time to time during the coming year, health departments are advised to be ready in advance with plans for prevention, which plans shall embody the frame work of necessary measures and as much detail as is possible. Laws plainly necessary should be enacted and rules passed now. Emergency funds should be held in reserve or placed in special appropriations, which appropriations can be quickly made available for influenza prevention work.

The probability that as an after effect of the influenza epidemic there will be an unusually high pneumonia rate for several years should be taken into consideration.

Of measures for the control of the disease, bacteriologic studies as to the nature of the organisms causing the primary infection and as to bacteria associations, new and improved procedures leading to the production and use of effective vaccines and curative sera, and the fresh air treatment of the infected, appear to offer most promise.

Bureau of Diagnostic Laboratories

B. L. ARMS, M.D., *Chief*

THE LABORATORY AND THE DIAGNOSIS OF VENEREAL DISEASE

The Adjutant General's office in Washington has issued a graph that shows the incidence of venereal disease among the million draftees whose examination blanks first reached his office. This is a sheet known as V. D. No. 27, and a study of it is well worth while.

This important subject must be faced fairly and squarely and only a thorough recognition of the facts will aid in cutting down this great menace to the life and health of our people.

The graph shows the incidence among the draftees from each state in the Union and also Alaska and the District of Columbia. The first five on the list are: Oregon, 0.59 per cent.; Idaho, 0.76 per cent.; Utah, 0.79 per cent.; Washington, 0.86 per cent., and Montana, 0.89 per cent. The five states at the bottom of the list are Georgia, 5.60 per cent.; South Carolina, 8.04 per cent.; Virginia, 8.45 per cent.; Alabama, 8.68 per cent., and Florida, 8.90 per cent.

These examination blanks while not an absolute index of the incidence of these diseases in the states are probably more comparable than any other means that could be found, as in all cases they were from men between the ages of twenty-one and thirty-one, and drawn by numbers, hence we may judge they would be fairly representative of the community from which they came.

Another point to be remembered is that these conditions were present when the draftee reached camp and in none of these cases was the disease contracted after reporting at the camp as in this instance they were not included, but we may add that of all cases of venereal disease in the army, five out of every six cases, were contracted before reaching camps.

Of the fifty states (including Alaska and the District of Columbia) forty-five showed an incidence of less than 5 per cent. while four had over 8 per cent.

Oregon, the state that has conducted the most vigorous campaign of education against these diseases, shows the result of the work by standing at the head of the list of states.

In the south but little work has been done until very recently and again the result is shown by the standing of the states at the foot of the list.

Lest our people should try to excuse the place on the list by the statement that it is due to the negro, the following figures will, I think, convince them that such is not the case:

Of the five states mentioned as being at the bottom of the list

the percentage of colored population, according to the 1910 census, is given: Georgia, 45.1 per cent.; South Carolina, 55.2 per cent.; Virginia, 32.6 per cent.; Alabama, 42.5 per cent., and Florida, 41 per cent. Mississippi with an incidence of 4.05 per cent. has the greatest percentage of negroes, there being 56.2 per cent. Louisiana with 43.1 per cent. of their population colored, or 2.1 per cent. more than Florida, had an incidence of 3.32 per cent., and Oklahoma with a colored population of but 8.3 per cent. ranks forty-fourth with an incidence of 4.50 per cent.

While the place occupied by Florida is not one to be proud of, let us take hold and improve conditions, and place our state higher in the list.

We should remember that these are communicable diseases and a great menace to the health of the public.

The laboratories of the State Board of Health are at your service and all of them will examine smears for gonococci, and the Tampa laboratory runs bloods for the diagnosis of syphilis each Thursday, while the Central Laboratory at Jacksonville, makes the examinations each Tuesday and Friday.

In spite of the fact that these tests have been made for the past three years, we frequently are asked if we are prepared to make them.

In 1917, at the Central Laboratory, 4,003 bloods were examined for syphilis, and in 1918 the number was 5,866, or over 1,000 more than the total of the examinations for malaria and typhoid combined.

Containers will be sent on request and we trust that we may aid in cutting down this great cause of morbidity and mortality.

CAMPAIGN AGAINST VENEREAL DISEASES TO CONTINUE

One of the compensations for the tragedy of the war is the fact that the medical profession, and the general public as well have been awakened to the magnitude of the venereal disease problem. The campaign begun, to protect the fighting men, is just as necessary to protect the civil population now that the war is over.

The prevalence of venereal diseases among prostitutes as evidenced by the conditions in Newport News, where in the latter half of the year 1918, out of 266 women arrested as women of ill fame, 229 had syphilis or gonorrhea, or both. This is about the average in other places. Florida had a larger per cent. of V. D. infected men who went into the army than any other state in the Union. This means that every public spirited physician and layman must work together to remedy this condition by supporting the movement to treat V. D., and control its spread, morally and physically.

Clinics for the free treatment of these diseases are in operation in Jacksonville, Pensacola, Miami, Tampa, Arcadia and Raiford, and will be instituted in a number of the other cities in this state.

This movement is nation-wide and with the help of the public, will be the means of saving many a child from blindness, insanity and a number of other ills and defects due to venereal diseases.

THE CLEANEST ARMY IN HISTORY

"Any time you hear a man declare that the American Expeditionary Forces are vice-ridden, knock him down!" Major T. H. Thompson, U. S. A. M. C., told a thousand delegates to the War Convention of the American Hospital Association embracing the institutions of the nation.

"A survey just completed for the last four months shows that in the forces overseas the average for social diseases is but twenty in every thousand, as against ninety-one in 1916. The United States Army is the cleanest of any army in any war in history."

Major Thompson said that of such diseases in the army, "only one-sixth were contracted after the victims donned the uniform and five-sixths were brought in by the draft."—*Providence News*.

Bureau of Vital Statistics

By STEWART G. THOMPSON, D. P. H., Statistician

COUNTIES	Typhoid		Malaria		Smallpox		Measles		Scarlet Fever		Whooping Cough		Diphtheria	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
State Total.	69	37	142	50	4	.....	282	3	33	1	24	19	141	32
Alachua	1												2	
Baker				1									3	
Bay		2	1	4							1		9	2
Bradford			1								3		1	
Brevard				1										
Broward			1											
Calhoun														
Citrus			14	1									2	
Clay			8	1									1	
Columbia	1										1			
Dade	3	1	1		1		2				1	1	7	1
DeSoto	6		2	1							2	4	1	
Duval	17	3	8	1			266	2	11		8	3	23	6
Escambia	2	1	18	1					1	1			10	4
Flagler														
Franklin			6											
Gadsden	1	2	8	3					4				5	
Hamilton														2
Hernando			5	3										
Hillsborough	5	5	27	3			6	1	7				33	2
Holmes	1	1		1							1			
Jackson			1	1										1
Jefferson	1	3		3									2	1
Lafayette		1												
Lake				2	1							1		
Lee													1	1
Leon	1	1	1						2				3	1
Levy	1	2	4	1									2	
Liberty														
Madison	1													
Manatee			4		1								3	
Marion	1	2	3	5									1	
Monroe	3			1					1					
Nassau	1		2								1			
Okaloosa	3		2											
Okeechobee	1													
Orange	2	1	1		1								1	1
Osceola														
Palm Beach													3	1
Pasco				2									1	
Pinellas			3				1		4			1	3	
Polk		1	7	1					2			3	15	2
Putnam		1	1											1
St. Johns			1				7						3	
St. Lucie	1	1												
Santa Rose	6												1	1
Seminole			3											
Sumter	1										13		1	
Suwannee	1	1		2								1	1	
Taylor	1	3	9	9										
Volusia	2	1							1			1		
Wakulla													1	
Walton	2	3												
Washington	3	1		2										3

Other cases reported: Paratyphoid, 0; Typhus, 0; Asiatic Cholera, 0; Bubonic Plague, 0; Yellow Fever, 0; Leprosy, 1; German Measles, 2; Chicken-pox, 14; Dengue, 3; Glanders, 0; Anthrax, 0; Rabies, 0; Tetanus, 1; Favus, 0; Beriberi, 0; Cancer, 6; Epidemic

Influenza		Dysentary		Mumps		Pellagra		Tuberculosis		Syphilis		Gonococcus Infection		Hookworm	
Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
11,615	3,007	19	41	540	.....	13	36	102	288	569	31	436	1	83	.....
48	88	.....	2	.....	.....	.....	3	4	6	4	.....	4	.....	1	.....
.....	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
119	37	.....	1	.....	.....	.....	.....	3	5	.....	.....	1	.....	1	.....
14	54	.....	.....	.....	.....	.....	.....	1	2	81	.....	1	.....	3	.....
5	11	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	4	.....
58	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....
.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
68	16	.....	.....	.....	.....	.....	.....	.....	5	1	.....	.....	.....	2	.....
17	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
.....	23	.....	.....	.....	.....	.....	.....	5	1	.....	.....	.....	.....	.....	.....
126	69	1	1	.....	.....	1	1	6	12	10	.....	14	.....	4	.....
214	33	.....	1	1	.....	.....	2	.....	2	2	.....	5	.....	3	.....
8,683	599	2	1	529	.....	2	2	28	39	294	8	348	.....	5	.....
135	179	.....	3	.....	.....	.....	2	11	7	4	.....	13	.....	4	.....
.....	5	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
105	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
1,178	231	7	3	2	.....	.....	6	2	21	52	5	.....	.....	1	.....
.....	13	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
1	12	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....
35	369	.....	4	1	.....	.....	.....	12	67	94	4	37	.....	9	.....
20	30	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
.....	114	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	5	.....
.....	32	.....	.....	.....	.....	1	1	.....	3	.....	1	.....	.....	.....	.....
5	25	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....
94	18	.....	.....	.....	.....	.....	2	.....	5	.....	2	.....	.....	.....	.....
4	8	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....
5	21	.....	.....	.....	.....	2	.....	2	3	1	1	1	.....	5	.....
35	29	.....	1	.....	.....	.....	.....	1	1	.....	.....	.....	1	3	.....
.....	25	.....	.....	.....	.....	.....	1	.....	2	.....	1	.....	.....	.....	.....
9	79	.....	.....	.....	.....	.....	3	.....	3	.....	.....	.....	.....	.....	.....
150	36	.....	1	.....	.....	.....	2	1	2	2	.....	1	.....	2	.....
23	97	8	2	1	.....	.....	.....	2	13	.....	.....	.....	.....	2	.....
9	49	.....	.....	.....	.....	.....	.....	2	13	1	1	.....	.....	.....	.....
9	17	.....	.....	.....	.....	.....	.....	2	5	.....	.....	.....	.....	1	.....
133	43	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
6	30	.....	2	.....	.....	.....	.....	3	7	.....	.....	1	.....	1	.....
.....	17	.....	.....	.....	.....	.....	.....	.....	2	2	1	.....	.....	.....	.....
8	13	.....	.....	.....	.....	.....	.....	3	5	.....	.....	.....	.....	1	.....
11	13	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	2	.....
4	43	.....	.....	.....	.....	.....	.....	3	9	8	.....	3	.....	1	.....
30	66	.....	.....	.....	.....	.....	2	.....	5	2	2	3	.....	10	.....
21	34	1	3	.....	.....	1	1	1	8	2	.....	.....	.....	.....	.....
53	10	.....	.....	.....	.....	.....	.....	2	7	.....	.....	1	.....	.....	.....
.....	14	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....
1	32	.....	.....	.....	.....	1	1	1	2	1	1	.....	.....	.....	.....
72	27	.....	2	.....	.....	.....	1	1	3	.....	.....	.....	.....	.....	.....
36	12	.....	.....	1	.....	.....	.....	2	1	.....	.....	.....	.....	4	.....
.....	84	.....	3	.....	.....	.....	.....	1	4	.....	1	.....	.....	.....	.....
34	41	.....	1	3	.....	.....	.....	1	3	1	.....	.....	.....	.....	.....
27	56	.....	3	1	.....	1	.....	1	7	4	.....	1	.....	3	.....
.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	38	.....	.....	.....	.....	3	1	.....	5	.....	.....	.....	.....	.....	.....
9	23	.....	2	.....	.....	1	2	1	2	.....	.....	1	.....	.....	.....

Meningitis, 9; Acute Poliomyelitis, 0; Trachoma, 141; Ophthalmia Neonatorum, 3; Pneumonia, 636; Trichinosis, 2.

Sanitary Engineering Notes

BY GEORGE W. SIMONS, JR., *Chief Sanitary Engineer*

Following the cessation of hostilities in November, 1918, there soon came a marked renewal of interest in municipal public works improvements. Previous to our entry into the war, plans had been made by a number of towns throughout the state for improved water supplies, new sewerage systems, sewage disposal plants and other sanitary measures, but owing to the condition of the municipal bond markets, the urgent need for money to conduct war work and finally the government embargo on construction materials, nearly all plans were shelved until recently. In one instance a city was given permission by the government to continue sewerage improvements during the war period subsequent to an assurance by the State Board of Health that such an improvement was a health measure.

During December, 1918, several cities began to show interest in immediate improvements. Monticello, in Jefferson County, advertised for bids on a municipal sewerage system—a utility badly needed in that city and one sure to improve health conditions there eventually. Miami Beach also came forward, holding an election for a bond issue to install a water supply system. On the west coast Sarasota called for bids for sewerage extension and water supply improvements, and Bradentown began considering their water supply problem more seriously, calling for bids on certain portions of the work during January, 1919. The city of Miami is about to install the first step of her intercepting sewerage plan and the first of a group of sewage disposal stations. The cities of Fort Lauderdale and Fort Pierce are both taking definite action to improve the quality of their municipal water supplies, the former considering a water softening plant, while the latter is planning to utilize an extensive process of aeration followed at a later date by a softening plant. Such measures will improve the water qualities of these two cities a thousand fold. Fort Lauderdale plans to hold a bond issue election during this current month.

Pensacola has recently passed a sanitary privy ordinance which, following the approval by the State Board of Health, becomes effective on February 15th. This ordinance provides that all privies in Pensacola shall be reconstructed or remodeled to conform with the box and pail type; also provides that an efficient collection service will be installed as well as a rigid inspection service maintained. This work will eliminate several thousand open, foul privies in Pensacola.

Word has been received at the Bureau of Engineering office that the Seaboard Air Line officials have made definite plans for, and are soon to install, a modern sewage disposal plant at the West

Jacksonville shop. This is welcome news to all those familiar with the existing crematory types. The men at the shops have long hoped for some betterment, and it comes after a formal protest by the State Health officials and hearty response by the Seaboard officials.

The city of St. Petersburg, during the month of January, put into operation the preliminary bar screen station. After two weeks' continuous use it was giving satisfaction and the results, considered generally, were excellent. During the month of February an efficiency test will be conducted at this plant to determine exactly what work is being performed by the screen.

Tarpon Springs recently completed the laying of water mains and sewerage lines in the colored quarters of the city. This improvement will add about 100 more sewer connections, thus putting out of commission that same number of open, foul toilets.

During January, in co-operation with the Jacksonville City Board of Health, the Bureau of Engineering conducted a sanitary survey at every dairy farm applying for an annual permit to dispense milk within the city limits. In every instance the method of excreta disposal was rigidly inspected and at every place not properly equipped with a sanitary means of excreta disposal, an official notification was left. In addition to the inspection of all means of excreta disposal the water supply used for dairy purposes in the washing of utensils, etc., was examined and samples of water collected for analyses. About eighty water supplies were examined. No permits will be granted by the City Board of Health until each farm can present a sanitary means of excreta disposal as well as a pure water supply.

Plans are now being made by the Bureau of Engineering to conduct ventilation surveys about the state in moving picture auditoriums and other places where people congregate. The work will be started in Jacksonville, later carried to Tampa. At the latter place the ventilation studies will be concentrated largely in cigar factories. Owing to the nature of this industry the ventilation of cigar factories presents a peculiar problem, one about which it is hoped to secure valuable information. These numerous ventilation studies are being prompted by the prevalence of influenza.

In accordance with Rule No. 69, adopted by the State Board of Health on April 18th, 1918, the following bottled waters were examined and permitted for sale in Florida during the year 1919. Laboratory examinations are made on each bottled water every two months. The following list was issued on January 15, 1919:

NAME OF WATER	BOTTLED AT
1.—Benscot Mineral	Austelle, Ga.
2.—Buffalo Mineral	Buffalo Lithia Springs, Va.
3.—Clysmic	Waukesha, Wis.
4.—Coesa	Saratoga Springs, N. Y.
5.—Distilled Water.....	St. Augustine, Fla.
6.—Geyser	Saratoga Springs, N. Y.
7.—Good Hope Mineral.....	Jacksonville, Fla.

NAME OF WATER	BOTTLED AT
8.—Laconia Springs Water.....	The Weirs, N. H.
9.—Mountain Valley Water.....	New York, N. Y.
10.—Poland Water.....	South Poland, Me.
11.—Polar Water.....	St. Augustine, Fla.
12.—Polar Water.....	Jacksonville, Fla.
13.—Polaris	Saratoga Springs, N. Y.
14.—Pura Water.....	Jacksonville, Fla.
15.—Purity Springs Water.....	Tampa, Fla.
16.—Stafford Mineral Springs Water.....	Vossburg, Miss.
17.—Still Rock.....	Waukesha, Wis.
18.—Tate Springs Natural Mineral Water.....	Tate Springs, Tenn.
19.—Tripure Water.....	Jacksonville, Fla.
20.—Tripure Water.....	Miami, Fla.
21.—Tripure Water.....	Tampa, Fla.
22.—White Rock Mineral Water.....	Waukesha, Wis.
23.—Celestins Vichy.....	Paris, France.
24.—Elder Springs Water.....	Sanford, Fla.
25.—Ideal Springs Water.....	Tampa, Fla.
26.—Mountain Valley Springs.....	Hot Springs, Ark.
27.—Orange City Mineral Water.....	Orange City, Fla.
28.—Perrier	Paris, France.
29.—Crystal Water.....	Daytona, Fla.
30.—Polar Water.....	Miami, Fla.
31.—Healing Springs Water.....	Hot Springs, Va.

The Disinfection of Small Quantities of Water

Among other things introduced by the great war is found a new product for the disinfection of small quantities of water. To effectively disinfect large quantities of water the merits of chlorine gas, sodium hypochlorite and chloride of lime are well known. But such agents are wholly unsuitable for disinfecting such small quantities of water as used by the soldier in his army bottle, by the camper, hunter and autoist in the thermos bottle. The use of the aforementioned chlorine antiseptics is generally impracticable owing to the instability of small tablets containing the required minute quantity of active disinfectant.

The difficult problem of readily disinfecting small quantities of water was carefully studied by Dr. Henry D. Dakin because of its importance. After considerable investigation he concluded, "the most suitable substance that we have as yet is parasulphondichloraminobenzoic acid." The chemical formula for this acid is $\text{Cl}_2 \text{N} \cdot \text{SO}_2 \text{C}_6 \text{H}_4 \text{COOH}$. The short term or name given to this substance is HALAZONE. It is a white powder "sparingly soluble in water and in chloroform and insoluble in petroleum. It readily dissolves in glacial acetic acid, crystallizing in stout prisms which melt at 213 degrees C. The substance explodes freely when rapidly heated on platinum foil, but, compared with most members of the group is remarkably stable."

The experiments conducted by Dr. Dakin indicate that "a concentration of 1:300000 will sterilize an ordinary heavily contaminated water (e. g. containing coli, typhoid or cholera organisms)

in about thirty minutes." It imparts a perceptible but not disagreeable taste to water.

For use Halazone tablets are combined with dry sodium carbonate to increase solubility. If properly made the tablets are "quite stable enough for all practical use."

To ascertain the effectiveness of Halazone tablets on a heavily polluted water a series of tests were recently made in the water laboratory of the Bureau of Engineering. The water used was taken from Hogan's Creek in Jacksonville, a stream heavily polluted with surface wash and receiving considerable sewage. The tablets used were furnished by the Abbott Laboratories of Chicago.

Samples of polluted water collected at six different times were treated with Halazone tablets, one tablet being applied to each 250 c.c. sample. Previous to the addition of the tablet a portion of the raw water was prepared for bacterial examination. Portions were then prepared at 15, 20 and 30 minute intervals following the addition of the Halazone tablet. The average results are shown below:

TABLE I.

	Bacteria Count per Cubic Centimeter	Gas Formation in Lactose Broth			Colon Forms
		10 c. c.	1 c. c.	1/10 c. c.	
Raw water without tablet.....	5000	*	*	*	*
Raw water plus tablet after 15 min.	500	*	0	0	0
After 20 minutes.....	160	0	0	0	0
After 30 minutes.....	50	0	0	0	0
Per cent. reduction in 30 minutes....	99	100	100	100	100

*—Means presence of gas formation and colon.

Dr. Fantus of Chicago, at the recent meeting of the laboratory section of the American Public Health Association, stated that the addition of a few drops of lemon juice to the sample of water under examination made the Halazone tablets effective in a shorter period of time. Following the doctor's suggestion a second series of samples from the same source as the preceding were examined with the addition of lemon juice, about four drops to each 250 c.c. of water. The results of these tests were as follows:

TABLE II.

	Bacteria Count Per Cubic Centimeter	Gas Formation in Lactose Broth			Colon Forms
		10 c. c.	1 c. c.	1/10 c. c.	
Raw water without Halazone tablets.	5000	*	*	*	*
Raw water plus tablet, plus lemon juice, after 15 minutes.....	120	*	0	0	0
After 20 minutes.....	90	0	0	0	0
After 30 minutes.....	50	0	0	0	0
Per cent. Reduction.....	99	100	100	100	100

*—Means presence of gas formation and colon.

The above results indicate mainly that Halazone tablets effectively disinfect small quantities of heavily polluted water within twenty to thirty minutes with a complete disappearance of gas-forming organisms and colon forms as well as a great diminution of bacteria. The addition of lemon juice apparently hastens the effectiveness to a degree.

Halazone tablets are prepared in a convenient form by several large laboratories—small vials of 100 to 1,000 being on the market. The Abbott Laboratories of Chicago, or E. R. Squibb & Sons of New York, are two of the organizations preparing this disinfecting agent.

RULES AND REGULATIONS OF THE FLORIDA STATE BOARD OF HEALTH, GOVERNING MORBIDITY REPORTS

Sec. 1.—It being the duty of the State Board of Health to keep currently informed of the occurrence, geographic distribution and prevalence of the preventable diseases throughout the State, and to prevent the spread of these diseases, and for that purpose the following Rules are adopted in accordance with power conferred on the State Board of Health, as provided by Chapter 6892 (No. 86), Laws of 1915.

Sec. 2.—The following named diseases and disabilities are hereby declared to be dangerous to the public health and made notifiable, and the occurrence of cases shall be reported as herein provided:

GROUP 1—COMMUNICABLE DISEASES

Anthrax	Mumps
Chancroid	Ophthalmia Neonatorum (conjunctivitis of new-born infants).
Chicken-pox	Paratyphoid Fever
Cholera, Asiatic (also cholera nostras when Asiatic Cholera is present or its importation threatened).	Plague
Dengue	Pneumonia (Acute)
Diphtheria	Poliomyelitis (Acute Infectious)
Dysentery:	Rabies
(a) Amoebic	Scarlet Fever
(b) Bacillary	Smallpox
Favus	Syphilis
German Measles	Tetanus
Glanders	Trachoma
Gonococcus	Trichinosis
Hookworm Disease	Tuberculosis (all forms, the organ or part affected in each case to be stated)
Leprosy	Typhoid Fever
Malaria	Typhus Fever
Measles	Whooping Cough
Meningitis:	Yellow Fever
(a) Epidemic Cerebrospinal	
(b) Tuberculous	

GROUP 2—MISCELLANEOUS DISEASES

Beriberi	Cancer	Pellagra
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Provided, That the State Board of Health may from time to time, in its discretion, declare additional diseases notifiable and subject to the provisions of these Rules and Regulations.

A Toast to the Flag



Here's to the Red of it—
There's not a thread of it,
No, nor a shred of it
From foot to head,
But heroes bled for it,
Faced steel and lead for it,
Precious blood shed for it,
Bathing it Red.

Here's to the White of it—
Thrilled by the sight of it,
Who knows the right of it,
But feels the might of it
Through day and night?
Womanhood's care for it
Made manhood dare for it;
Purity's prayer for it
Keep it so white.

Here's to the blue of it—
Heavenly view of it,
Star-spangled hue of it,
Honesty's due of it,
Constant and true.
Here's to the whole of it,
Stars, stripes and pole of it,
Here's to the soul of it,
Red, White and Blue.

—Anon.

HYGIENIC LABORATORY
WASHINGTON, D. C.
20 May 19
HUMAN LIFE IS THE STATE'S GREATEST ASSET

FLORIDA HEALTH NOTES



OFFICIAL BULLETIN

PUBLISHED QUARTERLY BY THE

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EDITED BY DR. W. H. COX, STATE HEALTH OFFICER

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TAMPA, FLORIDA, MAY, 1919

No. 5 (New Series)

*"Public health is the foundation on which
rests the happiness of the people and the
strength of the nation. The first duty of a
statesman is the care of the public health."*

FLORIDA HEALTH NOTES

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STATE BOARD OF HEALTH OF FLORIDA

HON. CHARLES T. FRECKER, President, Tampa

HON. ED. M. EARNEST Palatka

HON. J. E. GRAVES DeFuniak Springs

DR. W. H. COX State Health Officer

DR. V. H. GWINN, Assistant to State Health Officer

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LABORATORIES

Jacksonville

Tampa
Miami

Pensacola



THE Laboratories of the State Board of Health have been established for the purpose of giving aid to the people of this State, through physicians, by making investigations and reporting findings which may be of assistance in diagnosing diseases. There is no charge for this service. It is performed gratuitously. Physicians and surgeons in need of laboratory service are earnestly urged to make use of the facilities offered by the laboratories of the State Board of Health of Florida.

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THE value of Health Notes may be greatly increased if physicians and nurses will aid in causing it to be placed in the hands of parents to whom such information as it contains may be useful. Copies will be mailed to any address upon request.

Foreword

This is the season of the year to do the best work in preventing the spread of such communicable diseases as malaria and typhoid fever—hence swat the fly and kill the mosquito and prevent their breeding places should be emphasized. We have tried to carry these important measures to the people of Florida through the press.

The principal of "fewer flies" and less sickness should be impressed upon the school children as well as the housewives, and to what extent flies are a menace. It should also be impressed upon school children—in fact all the people—the great prevalency of malaria in this country and that the anopheles mosquito is the sole cause of the spread of malaria.

It is estimated that there are ten million people in the United States affected with Malaria. This is a conservative estimate and it is a conservative statement to say that a vast majority of these cases exist in the Southern States.

Think of the economic loss.

Quack Advertising

In one of our prominent newspapers there appears an advertisement that condemns vaccination against smallpox and typhoid, starting off with such headlines: "Is It Possible That Thinking, Scientific People Would Do Such a Thing?" and ending by stating: "If any of these diseases should get hold, chiropractic is the surest and quickest way to get rid of it."

This advertisement is so absurd that the State Health department would not notice it if its attention had not been called to it; furthermore it attacks vaccination, which the Florida State Board of Health recommends as do other State Boards of Health as well as the Army and Navy.

Is it possible that a chiropractor or any one else of ordinary intelligence believes that smallpox can be cured; moreover, is it possible that any one, even if smallpox could be cured, believes it better to have the disease than to prevent the disease? Smallpox can be prevented and the prevention is vaccination. The Florida State Board of Health advises vaccination and furnishes vaccine free. It is the duty of public health officials to prevent epidemics, if possible, and it is possible to prevent epidemics of smallpox. Thinking people will not be affected by a quack advertisement, but the unthinking and uneducated may be. The State Board of Health is trying to bring home to the people of this State certain educational features that will be beneficial in the way of preventing disease by improved sanitation and right living. Improvements in sanitation effect or control the spread of certain diseases, but this does not apply directly to smallpox—hence vaccination is advised.

It has been asserted by eminent authorities that vaccinia (cowpox) confers a more lasting and complete immunity against smallpox than does an attack of the disease itself; at any rate it represents the nearest approach to a perfect prophylaxis of which in all medicine, we have knowledge.

In the educational campaign of all State and city board of health, it should be recognized that the quack advertisers, with their grotesque misrepresentations, are even as much of a menace to a community as is disease itself. There is no subject upon which the average man or woman is so ignorant as that pertaining to health and disease, so that with the natural and inborn yearning of the human soul in distress for some specific, some perfect cure, which cannot be offered by the conscientious physician (because it does not exist), they are easily led astray by the plausible Charlatan who "having none of the virtues can best assume them all."

—V. H. G.

EPIDEMIC LETHARGIC ENCEPHALITIS

Epidemic lethargic encephalitis is probably not a new disease, as a study of the literature shows that a disease with similar symptoms has been observed in the past. Previous as well as present experiences would seem to indicate that the malady is closely associated with influenza, and while it is described as a distinct entity, it may be that it is a sequel to influenza somewhat similar to the paralysis following diphtheria. The condition occurs at all ages and in both sexes indiscriminately. It may come on acutely or slowly and is of indefinite duration. Symptoms may be mild or very severe and fatalities are more or less common. Convalescence may be prolonged.

The cardinal symptoms are sleepiness, asthenia, paralysis of cranial nerves, and fever, although the latter may only be present in the early stages of the disease. Fever ordinarily ranges between 101° and 102° F., but may be higher. There are definite paralyses, particularly of the muscles of the eyes, of the face, and less commonly of the pharynx. Ptosis, strabismus, diplopia, ocular incoordination and facial paralysis are frequently observed. The expressionless or "mask-like" appearance of the face is a striking diagnostic sign. The stupor or somnolence varies in intensity from drowsiness to a condition equivalent to a state of coma. Cataleptic symptoms may be observed. Delirium may be present. There may be some muscular rigidity. The voice becomes nasal, sentences are uttered slowly, and words are slurred. Occasionally, once started to speak the patient may chatter sentences so rapidly that they are unintelligible. There may be choric movements of the face, trunk and limbs.

Asthenia is marked. The patient often makes no voluntary motion.

There are no characteristic changes in the spinal fluid. This is an important diagnostic point.

At post-mortem examination there have been observed punctiform hemorrhages and cellular infiltrations around the vessels of the third, fourth and lateral ventricles, the pons and peduncles. The first segment of the spinal cord may show the same pathological changes.

The disease has been confused with poliomyelitis, tuberculous meningitis, cerebrospinal fever and botulism.

Epidemic lethargic encephalitis has been present recently in England, France and the United States.

In New York City there have been reported twelve cases; in Washington, D. C., there is known to have been one case.

The United States Public Health Service has received reports as follows:

Virginia, seventeen cases, including four in Richmond.

Illinois, forty-three, including twenty-eight in Chicago.

South Carolina, two cases.

Three cases of what would seem to be acute lethargic encephalitis have been reported in the Navy.

Malaria

One of the most prevalent of all preventable diseases in the State of Florida is malaria. It is so common as to be a menace to the general good health and efficiency of any community, especially in the South.

This is the proper time of the year to get ready to prevent the spread of this disease, which is sure to come with the warm days and nights. The cause should be removed. There was a time not far distant when the real cause was unknown and people were excusable for not preventing it. The methods or manner in which the infection was spread is comparatively a recent discovery and mode of transmission the most brilliant discovery of sanitary science. After all these discoveries and despite the fact that we have more knowledge of the cause, transmission and prevention, and more accurate means of diagnosis and a specific remedy, still malaria counts its victims by the hundreds of thousands annually. It is estimated that over seven million people in the United States are infected with malaria.

As is well known malaria is transmitted by the female mosquito of the variety known as anopheles and this is the only way to get the disease. It is a preventable disease if certain measures and precautions are taken and carried out successfully. The best and most thorough method of eliminating malaria, would be to wipe out the anopheles mosquito entirely, and this is not the impossible task that it sounds, but it requires community effort and in many instances, would be possible only through a large expenditure of energy and money.

To destroy the anopheles mosquito, it would be necessary to prevent them from breeding. They breed in still water and pools, and by the grassy edges of streams. It is often thought in some communities the cost of eliminating these breeding places would be too heavy. Nevertheless much might be done by draining or filling up pools where practicable. Malaria and mosquitoes were formerly quite prevalent in the marshy districts of Staten Island and the low lands of New Jersey, not far from New York City. By drainage and the use of oil, the mosquitoes have been greatly reduced in number and there has been a corresponding decrease in the prevalence of malaria.

It should be remembered that the bold, voracious mosquitoes that bite so impartially day and night, do not transmit malaria, however great nuisances they may be in other ways. The anopheles mosquito is shy, bites only at night and does not sing as loudly as the common mosquito. Often water which cannot be drained or oiled properly can be rendered comparatively innocuous as regards mosquito breeding, by the introduction of small fish, or what is commonly called top minnows, which devour the mosquito wig-

glers. While mosquitoes breed in water, they shelter themselves in brush and high weeds, especially during the day when the sun is shining. It is therefore a good plan to cut down all such weeds, especially in the vicinity of houses so that the mosquitoes cannot find shelter near by.

It is a wise precaution in districts in which the anopheles mosquito is found for persons, as far as possible, to remain after dusk in places that are properly screened. A good screen should have a mesh of sixteen wires to the inch. In addition to screens for the house, sometimes it is necessary to use mosquito bars, which are simply pieces of fine mesh material placed over the bed in such a manner as to protect the sleeper.

When drainage is too expensive or not practicable, oiling should be done as a supplementary measure. The object in using oil (petroleum) is to destroy the larvae of mosquitoes. To do this successfully, the surface of the water must be completely and continuously covered with a film of oil. The larvae cannot penetrate the oil film with their breathing tube—thus being cut off from the air they die. Mosquitoes do not lay eggs on the surface of oiled water. The larvae of the anopheles mosquitoes are the most easily destroyed for the reason that they rest and feed in a horizontal position at the surface.

For a complete description of how to oil waters for the prevention of mosquito breeding and their development, the Florida State Board of Health will gladly send out a pamphlet on "Oiling as an Antimosquito Measure," to any one upon request.—V. H. G.

RABIES (Hydrophobia)

With the coming of the hot weather there is apt to be in scattered localities over the State more or less apprehension over rabies or hydrophobia. There is less reason for such apprehension than is generally believed, although rabies is a real and terrible disease, and no precaution should be omitted where there is any reason to suspect its existence.

Nevertheless there is no more actual danger of rabies in hot weather than in cold weather. Dogs may be more irritable in extremely hot weather, in fact they are likely to be, but dogs are no more liable to rabies in hot weather, even during the so-called "dog days," than they are at other times of the year. The only way in which rabies ever has been transmitted to a human being is from the bite of some animal, generally a dog already suffering from rabies. Not every person bitten by an animal with rabies develops rabies, in fact one authority has estimated that only fifteen per cent. of persons bitten by rabid dogs develop the disease. The nearer the bite to the central nervous system, the greater the chance for development of rabies.

If possible, the dog which has bitten a person should not be

killed immediately but should be confined under observation for ten days in order to give the disease a chance to develop in the animal. By waiting this period of ten days to definitely determine if the animal has rabies is the best way to determine if Pasteur treatment should be given, and it will also be sufficient time to administer the Pasteur treatment. If this is done, examination of the dog's brain will determine whether or not it had rabies. If the animal is killed before the disease has opportunity for development, detection of rabies is difficult. The dog should never be killed by shooting through the head, as this often makes an accurate examination impossible. Prompt reports will be made by the State Board of Health on all dogs' heads sent to the Laboratory for examination. Care should be taken in the packing of the head and it should be surrounded by ice and sawdust, especially in hot weather.

Where there is suspicion that a person has been bitten by a rabid dog, the Pasteur treatment should be taken. Persons who can pay are expected to do so, but it is the intent of the State Board of Health that no resident of Florida should be forced to go without the treatment because of poverty. The Pasteur treatment is a practically certain preventive of rabies, the per cent. of persons taking the treatment and later developing the disease being so small as to be negligible.

Can rabies be exterminated? There is only one possible answer to this question, that is, that the dread disease can be conquered just as soon as the people of this country think the conquest worth while. It has been driven out of other countries and it can be driven out of this country whenever the people believe that the life and happiness of human beings are worth more than the comfort of dogs. That there is need for drastic action in fighting rabies is shown by the number of cases annually reported to this and other States. Placing a license tag on the dog has yielded good results in other countries, hence it should be made obligatory, as establishing the responsibility of the owner of the dog.

HANDLING FOOD

Dr. Evans, in his hygienic writings, copies some hints from another on clean habits as necessary to good health. Several unclean habits are mentioned, which are not only injurious to health, but offensive to good taste. Here are a few to show the tenor of them:

A waiter while taking orders will twist his mustache or scratch his head and then handle the food or the dishes before washing his hands.

A waitress in midsummer will carry a napkin under her arm and then wipe her plate with it.

Any day men can be seen to leave a toilet, pass the wash bowl without using it, and go straight to the dining table.

The tongue is the "greasing post" for salesmen in every kind of

food store. A baker will put his finger to his tongue and then pick up a sheet of paper and wrap a loaf of bread.

The street car conductor adds a certain amount of filth to each transfer by licking his finger before peeling a slip from the pile.

The grocer and the drug clerk will pick up a paper bag, open it by blowing into it, and then fill it with candy. The breath in the bag does not add to the cleanliness of the candy, though it may change its flavor.

It is not exactly pleasant to publish such things, but people, and often handlers of food, are so indifferent to cleanliness that such reminders are necessary. But lecturing is not going to do away with unclean habits. The only way to correct this evil is for customers to turn away and refuse to patronize the dirty handlers of food.—*Ohio State Journal*.

To the above we will add that we saw a young man in white coat and apron who handled food in a "dairy lunch," picking a sore in his nose, and then use the same hand for handling unwrapped sandwiches.

REMEMBER THY CREATOR

These hundreds of thousands young chaps who are returning to their jobs of working, of playing, of loving and of being loved, could in this flush of their jubilant health do no better thing than to attach this ancient reminder securely to the tablets of their memory:

"Remember thy Creator in the days of thy youth ere the evil days draw nigh."

This is no exordium to righteousness.

It is a homely hint about preserving your health, young man; a health that today seems as abounding as the eternal waters of the River of Life.

Health is something you care nothing about until it is mislaid, like your toothbrush, or your fountain pen.

But at forty, or fifty, or thereabouts, the average husky will stop and listen a bit.

Listen to the rumble of a protesting heart.

Listen to the jar of a kidney gone bad.

Listen to the whistle of a lung that has picked up a tack on the great white way.

Believe us, we know what we are talking about when we say that no material thing in this life is worth anything compared to the healthful body's power to do each day any job necessary.

Believe us also when we remark that right now, in the virile twenties, is the time to determine the sort of a time you are going to have living with yourself twenty years from now.

It is easy to keep your vigor; about all you need to do is to be half way sane in your habits; habits of work as well as of play; but for every little overdraft you send in now on your health balance you will have an accounting that will amaze you.

Before universal military training for the younger men brought us up to efficiency this country was becoming a place of old young men. Chaps who coughed, who went about with caved-in chests; chaps who peered at a drab world through thick lenses; chaps who were half men, and who had drifted into that sort of a state through neglect and who were candidates for the down and out club at 45.

There is no reason on earth why the average man should not do a day's work at 75.

And if from 21 to 31 the youth would pay half as much attention to keeping fit as he does to any of half a dozen little habits or hobbies that most men have, he would at 60 be ready to start life over, if he had to.

Ten minutes each day deep breathing; two hours brisk walk over the country once a week, and elimination of excesses, would store up much of the surplus energy of thoughtless twenty for the wise use of experienced 50.

All this isn't important; no more than making yourself a present of an added twenty enjoyable years of life.

And believe us, we know what we are talking about when we remark that life really is hardly worth enduring when heart pounds, and lungs wheeze, and stomach revolts, and kidneys protest, and you have to coddle yourself, and wear rubbers, and plasters on your chest, and sniffle whenever you stop by an open window.

Remember thy Creator in the days of thy youth, and save some of that vitality.

You will require it all if you are to die contented.—*Indiana Daily Times*.

DO YOU KNOW

That—A little cough often ends in a large coffin?

That—Bodily vigor (health) protects against colds. Keep well?

That—Careless sneezing, coughing, spitting spreads colds?

That—Open air exercise cures colds?

That—Colds sometimes get well in spite of the use of alcoholic beverages?

That—Living in overheated, air tight rooms invites colds and pneumonia?

That—Neglected colds often forerun pneumonia?

That—Persistent, oft repeated colds, indicate bodily weakness?

That—Living in the open air cures colds, pneumonia and consumption?

A CONFESSION

I am a murderer!

I play a safe game. I scatter disease germs in halls, in the street cars, wherever there is a crowd.

Few people suspect me. I am never detected.

I kill babies, children, grownups, impartially. Hundreds of hospitals are filled with those I do not succeed in slaying.

Thousands of graveyards are filled with those with whom I have more success. I am ruthless and cruel. Yet I could be restrained if people really understood how much harm there is in me. Instead of that they think I am funny and laugh at me. Some of them even cry the German word for "health" when they hear me.

For I am a SNEEZE.—*Bulletin Rhode Island Board of Health.*

If you work for a man, in heaven's name work for him. If he pays wages that supply you your bread and butter, work for him, speak well of him, think well of him, stand by him, and stand by the institution he represents. I think if I worked for a man I would work for him. I would not work for him a part of the time, but all of the time. I would give an undivided service or none. If put to a pinch, an ounce of loyalty is worth a pound of cleverness. If you must villify,, condemn and eternally disparage, why, resign your position, and when you are outside, damn to your heart's content. But, I pray you, so long as you are a part of an institution, do not condemn it. Not that you will injure the institution—not that—but when you disparage the concern of which you are a part, you disparage yourself.—Elbert Hubbard.

SEX HYGIENE

Don't marry your cousin.

Family intermarriages have a tendency to produce the blind, deaf, imbecile and crippled children.

There are 50,000 blind children in the United States. It is claimed that gonorrhea is responsible for 12,000 of them.

The father or mother who does not believe in sex hygiene education may invite the destruction of son or daughter.

Women and children are the innocent victims of venereal diseases.

There is no more reason why the average healthy woman should be hauled to a hospital a few weeks after marriage than there is a necessity of a dispensary for cats.—*Exchange.*

A SILVER LINING TO THE CLOUD

One good ought to come out of all the publicity given to influenza. People have had impressed upon them as never before the mode of transmission of certain diseases, and the responsibility of each individual for the health of his neighbor. The fact needs recognition that the man who is careless about sneezing and spitting is a bad citizen; it may be that the public generally will appreciate this better as a result of the demonstration of the present epidemic.—*Massachusetts Commonwealth.*

PUBLIC HEALTH DEPENDS ON YOU AND ME

It is absolutely true that public health depends on you and me, for the keynote is personal hygiene. Disease prevention in any community rests ultimately on the average man and woman. The community may establish hospitals and clinics for the treatment of tuberculosis, but these agencies will be successful in only limited degree unless the average man practices personal hygiene and takes care to prevent the possible communication of this disease from himself to his family and friends. The community, through its health regulations, may ensure a milk supply safe from typhoid infection, yet the disease cannot be stamped out so long as patients or "healthy carriers," with unwashed hands prepare and handle food to be consumed by others.

That personal hygiene is the keynote of modern sanitation is especially true in respiratory diseases. We have not yet learned how to prevent outbreaks of colds, bronchitis, pneumonia and influenza, but we do know that their spread could be checked if the principles of personal hygiene were universally practiced. At the present time the hope for control of many diseases, which are important among the causes of death, rests with the individual.

In the current epidemic of influenza, there is a great deal that we do not know about its causes and the details of its methods of spread. It is reasonably certain, however, that it is communicated from the sick to the well through methods of contact which effect the exchange of nose and throat discharges. It was Professor Sedgwick who reduced prevention of typhoid to its simplest expression by saying, that it is merely necessary "to keep the bowel discharges of A out of the mouth of B." In influenza it is likewise true that prevention will find a most substantial foundation if the oral discharges of A can be kept out of the throat of B. If this is to be done at all, it must be largely through the care taken by the individual in what is termed, "respiratory hygiene." The responsibility lies with the individual. It is his duty towards his neighbor, on the part of the infected man, to prevent the scattering of his germs among his fellow men; it is his duty to himself on the part of everybody, to guard the portals of entry of his body against the microbes of others.

This is very easy to set down for a principle, but the practice is the great problem that confronts health administration everywhere. It is a problem that is to be solved only with the co-operation of the individual. It is the more important to have this distinctly understood since its sphere of prevention is not limited to influenza, but includes a long list of common infections, which are all of them preventable diseases.

Public health officers must never forget the importance of the sanitary education of their people, while the individual must realize his own far greater responsibility. When the slogan, "Public health depends on you and me," is accepted and acted on, the first great step towards prevention will have been taken.

DISCOVERY OF MAN

Woman was discovered in 1854; man in 1914. The dates are fixed by Florence Nightingale in the case of woman; by the great war in the case of man. In a few short years woman would have become super-woman merely by a process of "puffing up." Happily for woman, man was discovered; and though her star shines none the less brightly, it is now not the only light in the firmament. Quite accidentally woman came across him. It was when the army called for things to carry guns. Then man appeared. He was rather a surprise to himself. He grew in a most astonishing way in his own estimation during the next few weeks. He had not thought there were such powers of development within his spare frame. He began to feel a man. He had always had a sneaking kind of idea that he was one; but he had never dared to make any counter-demonstration to the woman advertisement. Besides, it was not worth while to try to convince people who were full of the one idea. It was woman's day, and he knew it. He did not know that his own discovery drew so near.

All over England today women are finding out what it means to be without a man. He was no angel—she has no delusions about that—but he was an opinion at hand, even though she did not take it; he was an excuse when she did not want to do things. "John won't" was usually enough for her relatives; and he represented the final judgment to the children. "I'll tell your father," saved her a vast amount of trouble.

Between man and woman is growing up a new understanding which will help considerably after the war. She has got behind his life and seen what influences it. She also knows what perils encompass it. No longer will ignorance masquerade as a mother. The women of the future will know the weapons their sons need and will see to it that they have them.

Every woman in this war has learned the worth of a man—she has discovered him. He is once again her hero, her knight errant.—*An English Woman.*

MEDICINE AND SOCIAL MORALS

The State Board of Health has established a Bureau of Venereal Diseases as a part of the State's control of these diseases, and the system is now in working order. The film "Fit to Fight," has been shown to thousands and appreciated. The establishment of such a department is an innovation in public health work in this State and it is hoped that public opinion will be aroused to support the control of these diseases.

The following taken from a paper by Lieutenant E. M. McKee, Sanitary Corps, N. A., may be illuminating:

"From the medical and health standpoint, disease must be checked, posterity freed from widespread venereal infection, and

manpower, fit to fight, must be conserved. On the side of morality and idealism so essential to the progress of our race, the problem is one of preserving the soul of the nation. The crusade against prostitution and venereal disease is a crusade for a single standard of morality, for a finer American manhood and womanhood * * *.

"From military records we know that in civilian ranks there is proportionately twice as much venereal disease as in the army, due to the fact that the civil community has largely ignored its responsibility heretofore. Education is the initial step to bring in a new era, and the home must always be the center of this education and for the imparting of the truth."

HELL'S DEADLIEST POISON

Dr. Guilford H. Sumner, secretary of the State Board of Health, has again sounded a loud note of warning in connection with the terrific inroads of that most detestable of all human ailments, venereal diseases. This paper has called the attention of the public to this loathsome subject a number of times, but it is an insidious proposition and there is only one agency that will stamp it out; that is quarantine with publicity. We might just as well take hold of the matter resolutely and without gloves. Some day perhaps the masses of the people will awaken, possibly after each family has felt the results directly or indirectly, and tackle the appalling menace with vigor, but then it will be too late; its ramifications will have become so widespread that the results of today cannot be known or observed on the surface, oftentimes.

The time to get at this matter is in early life. Children of both sexes should be advised, and advised in a way that will leave no fog in their minds. It is not a pleasant task, according to our present day view, but it is absolutely necessary. If it is not done promptly, frankly and forcibly an awful injustice will be done children, and for this calamitous neglect the race will have to suffer.

Talk about enemy bullets; why, the damage they have done to American boys is negligible compared with the damage that is being done the race now by prostitution. Do you get that? Read it again, and if you doubt it write to Dr. Sumner at Des Moines and get his opinion. If this wretched thing is going to get our boys and girls and generations to come must pay the penalty, as hundreds of thousands are now paying it, don't you think it is time to take hold of the matter in some manner other than by slapping offenders on the wrist and saying, "tut, tut?" If this startles you, send for the last bulletin of the State Board of Health. It is filled with facts that will drive you crazy.

NEW YORK HOTEL PRACTISE "A LA MODE"

A professional New York newspaper funny man is responsible for this account in *The World* of the way in which a famous Gotham hostelry treats its guests:

You enter the Forty-second street lobby, where you are met by the proprietor. He searches you to ascertain how much money you have and if the amount is satisfactory he gives a signal for five hat boys to assault you and punch you into the restaurant.

You seat yourself meekly, and fifteen minutes later a young man comes up and places a glass of water on the table. He is the waiter's valet. Ten minutes later another man steps up to the table and delivers a napkin. He is the waiter's private secretary.

Finally, a gentleman in handsome evening suit hands you a menu printed in French and meaningless to you. In desperation, and at random, you indicate with your finger an article on the menu, and the haughty gentleman in evening suit says, "Pardon me, sir, but that is one of the musical selections. The orchestra is playing it now."

In a state of humiliation you order a lamb chop. As you are munching your food later on, the gentleman in the evening suit accosts you again and asks, "How did you find the chop, sir?"

You reply, "By moving aside the pea on the plate. The chop was under it." Then you pay the check, hand the hat-boy a quarter in return for another man's hat, rush outside, and board a street car, while the head waiter drives away in his limousine.

In every prominent hotel in New York there is a sign reading, "Leave your valuables at the desk." You might as well do it. The proprietor will get them, anyhow.

"Health is fundamental to all success. The prosperity of our State, in the last analysis, depends upon the bodily vigor of its citizens. This is a self-evident proposition—a premise which every right-thinking man must admit. Without good health as an asset, our people cannot meet the severe physical and mental requirements of the time."—*Gov. H. M. Dorsey, of Georgia.*

LEGALLY SPEAKING

Scene—A crowded courtroom. Prospective jurymen anxiously waiting to be called. Judge takes his seat. Bailiff announces court open.

Judge—Call the panel.

After the usual preliminary questions which the prospective jurymen answers satisfactorily.

Judge—Now, sir, is there any reason why you cannot serve on this jury?

Juryman—Yes, sir; I have the itch!

Judge—Scratch him off, Mr. Clerk.

SOME HOT WEATHER SUGGESTIONS

No Need for Summer Ills and Discomforts If Simple Rules of Good Living Are Followed

Breathe fresh air, especially in your bedroom and workroom. Fresh air as well as sunshine kills the acteria of contagious diseases.

Wear clothing that is light, sufficient and porous. The air should pnenetrate to the skin.

Live as much as possible in the open air.

Breathe slowly and deeply. Breathe through the nose and not the mouth.

Do not eat too much, especially of meats and eggs. Vary your foods and eat slowly.

The best foods are boiled milk, cottage cheese, fruits, vegetables, bread and potatoes.

Avoid constipation. Fruits, oil, vegetables, butter, cream and sugar will aid you.

Hold yourself straight when standing, sitting, and when walking.

Avoid medicines. Only doctors should prescribe medicines.

Be strong and clean. Disease germs will be less liable to get a hold on you.

Work hard, but plenty of rest and recreation.

Get as much sleep as you need.

Be content and of good cheer. Try to drive out of your mind thoughts which torment you. They have a bad influence on your health.

INFLUENZA

The editor, 'e ses to me:

"Take up your bloomin' pen, sir,
An' write a line or two divine
About this influenza."

So up I gets an' ses to 'im,

"I can't; I've never met it."

"That's rot," ses 'e; then ses to me:

"You just go out an' ge tit."

Then all at once a little germ

Comes 'ummin' round my den, sir,
An' bites my nose, an' ses, "I s'pose
You know I 'm influenza?"

Says I "Ithink we've met before—

I'm sorry I forgot it.

Give me your view about the "flu!"

Ses 'e to me, "You've got it!"

—H. H. G., *London Daily Express*.

FLY FIGHTING RULES

Keep the flies away from the sick, especially those ill with contagious disease. Kill every fly that strays into the sick room. His body is covered with disease germs.

Do not allow decaying materials of any sort to accumulate on or near your premises.

All refuse which tends in any way to fermentation, such as bedding straw, paper, waste and vegetable matter, should be disposed of or covered with lime or kerosene oil.

Screen all food, whether in the house or exposed for sale.

Keep all receptacles for garbage carefully covered and the cans cleaned or sprinkled with lime.

Keep all stable manure in vault or pit, screened or sprinkled with lime, oil, borax or other cheap preparations, such as are sold by a number of reliable manufacturers.

See that your sewerage system is in good order; that it does not leak, is up-to-date and not exposed to flies.

Pour kerosene into the drains.

Screen all windows and doors, especially in the kitchen and dining room.

If you see flies, you may be sure that their breeding place is nearby filth.

If there is no dirt and filth there will be no flies.

If there is a nuisance in the neighborhood notify the Health Department at once.

WHO AM I?

I am as old as the first man and as young as the last born babe—ever changing and unchanged. Where human intercourse is possible there may I be found.

I devastate cities and countries and continents. Athens I robbed of her glory and Rome of her strength. I conquer the armies of conquerors.

I laugh at barriers and bars and bolts. I penetrate both hovel and palace and ravage the frames of the young, the old, the weak, and the robust with equal delight. I feel no pity for age, nor sex, nor beauty, nor rank.

I assume many forms, and those whom my first malevolent touch has left weak and defenseless, I seek, ghoul-like, in other guise, again and again to destroy. Cooing infancy, laughing childhood, ambitious youth, happy motherhood, protecting fatherhood and contented age—all these I garner in my remorseless harvest.

Where ignorance, poverty, dissipation or physical stress prevail I take my greatest toll. I am insidious, insatiable, malignant—the unceasing enemy of all mankind.

To the superstitious and the uninformed I am inscrutable, but my clandestine methods of travel and approach cannot withstand the enlightenment of men. Where publicity and education exist, there I do not prosper.

I avoid those with clean lives and careful habits. I languish before the investigation of science, which steals away my virulence.

I can be banished by organized community effort, and when this shall be accomplished my name will lose its potency of mystery and fear, and my ravages cease—for I am

CONTAGION

—*Kansas State Board of Health Bulletin.*

ARMY-TRAINED SANITARIANS FOR PUBLIC HEALTH WORK

Many sanitarians whose training has fitted them exceptionally well for peace-time public health work are being made available by the rapid demobilization of the army.

Investigations conducted by army medical men has revolutionized medical and sanitary methods and technic and set them far ahead of their normal progress. Through the results obtained in curative work, preventive work, and sanitation, our men are returning to us more physically fit than ever before, and the burden of responsibility of keeping them so lies with us. With the men available who performed such admirable work in the army, now is our opportunity to mobilize our forces against disease in civil life. The knowledge and experience gained by sanitarians in conserving the health of the army will prove invaluable in keeping our people "fit to work" as our soldiers have been kept "fit to fight."

In anticipation of the demand for these well-trained men returning from the Army, the American Public Health Association (Boston, Mass.) has established a free Health Employment Bureau and will be glad to furnish on application, a list of health officers, laboratory workers, vital statisticians, sanitarians, industrial hygienists, or school medical inspectors, etc., according to your needs, together with condensed information in regard to each applicant. By furthering the employment of these men you will be performing a patriotic service in recognition of their work, as well as securing excellent personnel for improving health conditions.

In writing, please state the salary contemplated and mention the type of position offered.

OUR ANCIENT ENEMY—THE FLY

"House flies have taken their place in the general evolution of living matter," says Dr. Edward H. Ross, one-time Health Officer of Port Said, the Suez Canal district and Cairo.

It is well known that many fossils of the house fly appear in the tertiary rocks, and even in an earlier strata, known as Devonian; and everyone is familiar with the remains of flies found in fossil resins known as amber. Every Sunday school scholar knows the history of the plague of Egypt which numbered flies among the calamities. Three thousand years later history repeated itself when the fly plague visited Cairo in 1906.

On the most ancient Egyptian engravings, slaves are shown

holding palm leaves, which were used for fans and "fly-flappers"—we now call them "swats." It is a matter of history that the ancient Romans were much annoyed by flies, and that a nobleman invented the bed curtain as a substitute for the "fly-flapper," as a flapping slave was wont to take his siesta while the master was indulging in his.

The Mosaic laws and the laws enunciated in the Koran aim directly at sanitation, which, if they had been observed, would have prevented many of the fly-borne diseases; for fly-reduction is merely a question of efficient sanitation.

In 1658 Kircher propounded and published in Rome that flies played an important role in the transmission of disease, which, viewed in the light of our present-day knowledge, shows him to have been a close observer with a clear knowledge of supposed facts, which in recent years have been scientifically demonstrated. He said: "There can be no doubt that flies feed on the internal secretions of the diseased and dying, then flying away, they deposit their excretions on the food in neighboring dwellings, and persons who eat it are thus infected."

Even earlier than this a celebrated Italian physician, Mercurialis, who lived from 1530 to 1607, advanced a similar theory, although the scientists and physicians of his day gave his theory scant credence, "and thus," said someone, "the centuries went by before this momentous fact was rediscovered, and again stated in terms to arouse the attention and interest of the civilized world."

Verily, "there is nothing new under the sun."

Professor Wm. A. Riley, in a recent article in *Science*, said: "What the present status of preventive medicine might have had Kircher's dictum been accepted is, of course, entirely speculative, but it is reasonable to suppose that preventive medicine would have been placed on a sure foundation a century before it was, and that the problem of fly extermination, which is now engaging the attention of the world, would have been solved and its history now have been but a memory. And who dare reckon the lives that would have been saved and the treasure that has been wasted during the years from Kircher's time until now.—*Kansas State Bulletin*."

SIX STRATEGICAL MOVES TO USE IN YOUR CAMPAIGN AGAINST THE FLY

Here are six strategical moves to be used in your campaign to exterminate the fly. It is the plan of battle used and recommended by Dr. Jean Dawson, famous fly fighter and chief of the Health Division's Bureau of Fly Prevention:

1. Get after the breeding places early. See that your backyard is free from fifth and that manure is hauled away weekly from stables that may be in your neighborhood.
2. Keep the fly out of your kitchen. The female cannot lay

her eggs until after she has had a full meal of rich foods, such as butter, cream and sweet stuffs.

3. Keep the fly away from baby. Thousands of germs cling to the feet and sucker of a fly. A fly leaves a trail of these on the skin of any person it touches.

4. Keep your garbage can tightly covered. The fly feeds and breeds in the refuse such cans contain.

5. Place traps in your yard some distance from the house. Then you can trap the pests before they have a chance to get into your home.

6. Keep tab on your grocery and meat market. If there are flies buzzing about you may rest assured the store is not clean. By keeping the store and its surroundings spotless and by using traps the proprietor can practically eliminate flies. If he doesn't, take your trade to one who does.

INSECT PESTS

Some of the most serious diseases of man are caused or transmitted by insects. Even if that were not true, the discomfort and the physical and mental irritation caused by some of these insect pests would be an ample reason for issuing this leaflet.

If we but knew
The cause of flu
And whence it comes and what to do,
I think that you
And we folks too
Would hardly get in such a stew
Do you?

—*Illinois Health News.*

H₂O AS AN EXCITANT

Doctor—Yuo must avoid all excitement; must cut out the beer and whiskey, and drink only water.

Patient—But, doctor, the idea of drinking water excites me more than anything else.—*Boston Transcript.*

Protect your family from the house-fly—mankind's most deadly enemy.

The Scope of the Work of the Bureau of Education and Child Welfare

GRACE WHITFORD, M.D., *Director*

The work of the Bureau of Education and Child Welfare naturally divides itself into three parts: prenatal, pre-school age, and school-age work.

Our aim in the pre-natal work is to help reduce our State's large quota of the 15,000 women of the United States unnecessarily dying from the hazards of child bearing; and to help decrease our large mortality rate in the first year of life (particularly in the first month of life) by a more intelligent care of the pregnant woman. We know, now, that much of this "first year" mortality is due to lack of proper pre-natal care. This conservation is being started in a small way by an educational campaign, a distribution of literature, and by the publication of articles in the press covering the different phases of the work which are:

1.—The encouraging of the establishment of maternity centers in rural districts and of provision for ample facilities for maternal work in hospitals being built or recently completed.

2.—A regulation of midwifery which must be put into force before much reduction of our high mortality rate occurs; for the majority of our women are attended under this system or lack of system, and in the average case by women of absolutely no training and with small regard for ordinary cleanliness in what is truly operative procedure. The compulsory use of silver salts in the eyes of the new-born must be demanded legally.

3.—An educational campaign for our girls who need training for the most difficult of professions, motherhood; the only one, it seems, in which they have none. (Mother lover never taught any woman how to sterilize milk bottles or how to prepare her baby's food when Nature ceased to provide the best of nourishment). Incidentally, it must not be forgotten that our boys need training for fatherhood, as well.

4.—An educational campaign for our women, many of the well-to-do having as little conception of the care necessary for the expectant mother and her child in utero as her humbler sisters. This simple knowledge which, after all, is largely one of personal hygiene and common sense, must be made plain. Much along these lines (with girls and women) can be done when our cities and rural districts are thoroughly covered by visiting nurses and social service workers who will do house to house visiting, give practical demonstrations in the homes, and have classes for groups of women and girls. The Vital Statistician of the State Board of Health is sending a book on baby care to each mother whose child's birth is registered. This Bureau has plans for establishing a registry for expectant mothers.

Back of all the pre-natal problem, of all Child Welfare work, in fact, lies the economic problem: the family income must be sufficient for the necessities of the mother and her offspring or must be supplemented from public funds. It is not charity, but common sense and good conservation, to provide properly for a woman doing her highest duty toward the State and to aid her in bringing forth a child properly equipped mentally and physically to be that State's finest product—a good citizen. A bill for "Mothers' Pensions," placing the filing of records and compilation of reports in this Bureau, is before the Legislature.

Our pre-school age work is next in value to the pre-natal. Well conducted examinations of children under six should be held in each community periodically and defects, usually slight if attended to early, remedied. For some years, "Baby Weeks," conducted by women's organizations, have been annual events in progressive communities. In this, our "Children's Year," the work covered nearly all of the State and in two counties, Lake and Pinellas, in spite of the "flu," such clinics were held twice. The Federal Children's Bureau reported to us nearly 8,000 official "weighing and measuring cards," made out as part of thorough examinations, sent in for its compilation. We feel that the intelligent enthusiasm engendered by the constant work and fine organization of "Children's Year" is going to bear fruit in markedly reducing our pre-school age mortality. And that, even with the terrible epidemic that caused the death of so many small children from lack of care as well as from the actual disease, we shall have succeeded in saving a large share of the 912 lives of children under six—the goal set us by the Federal Children's Bureau. Our "Year" ends May seventh, and soon thereafter we shall be able to give the actual statistics. Through these physical examinations, the little children become accustomed to the routine as a matter of course, become more amenable to treatment, and early learn what to do for themselves. Often at a small expense, the parents have defects, before unnoticed by them, remedied—things that in later life might assume greater proportions as to cost, risk and loss of school hours; the last in itself a personal loss to the child as well as an economic one to the schools. Best of all, it is sending into the schools fit pupils, and is not requiring our overtaxed school system to cope with and to remedy all defects and neglects of the first six years of life. The pre-school age work has been done largely by volunteers, our best specialists, general practitioners, dentists, nurses, public spirited women and women's organizations, as well as the county workers giving freely of time and talents. Literature is widely distributed through this channel directly reaching the mothers. Exhibits are sent to each clinic and practical instruction given. In the past year, the work has been more widely carried on to the colored mothers and babies than ever before.

Last comes the school age work. Through the courtesy of the State Board of Health, all of the district health officers, as far as their other work permits, have been lent for the physical inspec-

tion of school children this term. In this way, and through this Bureau, the work is being carried into every district of the State, although it cannot reach every county this year. Naturally, it is best done and with more permanent results where counties employ health workers, either visiting nurses or social service workers, or both. Palm Beach, Brevard, Lake, Orange, Pinellas, Hillsborough and Escambia counties have this service. Dade will have it the coming year, and others are contemplating such a step. Jacksonville takes care of her own school work and Pensacola is to have a city nurse whose time will be devoted to this kind of work largely. Ormond Beach has a district nurse, paid from her Red Cross funds. Every city and county in the State must sooner or later assume her individual responsibility of caring for her children, as well as her adult population, with a full-time health service. It is true economy, not an additional expense.

Almost without exception, the work of examining the school children this year has been thorough and satisfactory. There has been splendid co-operation from school authorities and parents. Many mothers, hearing that the work is being done in the neighboring school, bring the younger children for examination, also. Visional and auditory defects are searched for, as well as orthopedic troubles, throat abnormalities, dental defects, etc., and height and weight taken for a nutritional index. The small child with properly cared for teeth is the exception; a good throat is almost as rare; cases of blindness total or partial in one eye are lamentably common with a history of "sore eyes" as the causative factor. Children under-weight are far too common. The county workers are getting into the service of the orthopedic department of the State Board of Health cases which, if neglected, would become in later life, undoubtedly, charges of the State. In the schools, children are being taught personal hygiene, proper diet, correct position. It is gratifying to see how quickly they begin to increase their chest expansion to vie with the boy or girl having the best record of the school. They immediately begin to put their health education to practical use.

Following the physical examinations in a number of places, hookworm clinics in the schools are being conducted by experts from the State Board of Health laboratories.

A copy of each child's record card, continuous for twelve years, is made and kept on file in the office of the Bureau. A resume is made of each school and each county and copies sent to the principals and county superintendents, the original remaining on file in our office.

It has been encouraging to note, since our work began in September, the number of schools providing hot lunches for pupils and teachers, and the number having introduced setting up exercises for the boys and girls. Local women's clubs have supplied many of the schools with their filing cases for their record cards. Other schools have been given school scales so that the monthly weighing and measuring might be a greater success.

With the lack of hospitals, medical schools, free clinics in the State, the great problem has been to care for the children needing treatment whose parents could not afford it. However, wherever there are county workers, the child who cannot have necessary care is a rarity, for these women have interested private individuals, clubs, associations, doctors, dentists, so that the work is done at cost for the poor children or entirely free if necessary. The doctor who will not give his services is so rare a specimen as to prove the rule. The physician who at first resented a procedure which at first he feared might "cure the children and take his bread out of his mouth," is finding his office practise markedly increased by patients who formerly never called him for anything except emergencies or as a last resort. They are coming to him for counsel where formerly they neglected "minor ailments" or resorted to patent medicines.

There is in many sections of the State a dearth of eye, ear, nose and throat specialists. California suggests, to solve this problem for her own State, courses for the general practitioner, teaching him the technique for throat operations, at least, so that children may have corrections made properly (tonsils excised, not clipped, for instance) by their family doctors. Should we, in this State, get to this point, we shall not have the cases of deafness from adenoidal and tonsillar growths treated by "ear drops." To solve this problem for the country children, especially, the Social Service Worker of Palm Beach County has established an eye, ear, nose and throat clinic to which specialists give their services Saturday afternoons, the Woman's Club providing the rooms. She is also establishing a dental clinic for the children to which the county's dentists are giving their service. Other counties, feeling this great need, are casting about for ways and means. One county, in which a year ago almost every child and many of the teachers had follicular conjunctivitis, now has these cases as exceptions. The principals tell me that the children's condition and their work have improved seventy-five per cent.

It is a big and never ending problem with new angles appearing constantly. However, it is constructive work of the highest order. When you deal with adults, no matter how necessary the work for the protection of the community or from an humanitarian standpoint, you are palliating. When you deal with children, you are getting permanent results—you are definitely molding the future of the race.

Bureau of Vital Statistics

By STEWART G. THOMPSON, D. P. H., Director

COUNTIES	Typhoid		Malaria		Smallpox		Measles		Scarlet Fever		Whooping Cough		Diphtheria	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
State Total.	83	28	68	23	5	.....	548	30	37	2	22	7	70	18
Alachua	.....	.....	3	.....	.....	.....	9	4	.....	.....	6	1	1	1
Baker	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bay	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bradford	2	.....	1	1	.....	.....	4	.....	.....	.....	.....	1	.....	.....
Brevard	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Broward	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calhoun	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Citrus	.....	.....	4	.....	.....	.....	8	.....	.....	.....	.....	.....	.....	.....
Clay	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....
Columbia	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	1	.....
Dade	13	2	1	.....	.....	.....	25	.....	3	.....	1	1	18	1
DeSoto	8	1	1	.....	.....	.....	1	.....	1	.....	1	.....	1	1
Duval	18	2	8	1	.....	.....	413	13	13	.....	5	.....	9	1
Escambia	6	2	17	1	.....	.....	21	1	2	1	.....	.....	4	2
Flagler	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gadsden	3	.....	3	1	2	.....	.....	.....	.....	.....	.....	.....	3	2
Hamilton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hernando	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hillsbor'gh	10	5	12	2	1	.....	16	1	10	1	1	.....	14	1
Holmes	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Jackson	.....	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	1	.....
Lafayette	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake	1	.....	.....	1	.....	.....	10	.....	.....	.....	.....	.....	1	.....
Lee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Leon	2	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....
Levy	.....	.....	1	1	2	.....	6	.....	.....	.....	.....	.....	.....	.....
Liberty	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madison	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Manatee	.....	.....	.....	1	.....	.....	1	.....	.....	.....	8	.....	2	.....
Marion	.....	2	5	1	.....	.....	10	.....	.....	.....	.....	.....	1	.....
Monroe	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	7	.....
Nassau	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Okaloosa	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	1	.....
Okeechobee	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Orange	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Osceola	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Palm Beach	1	.....	1	1	.....	.....	1	.....	.....	.....	.....	2	.....	1
Pasco	.....	1	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....
Pinellas	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Polk	2	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	3	.....
Putnam	1	3	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
St. Johns	.....	1	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
St. Lucie	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Santa Rosa	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	.....
Seminole	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sumter	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Suwannee	.....	1	.....	3	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
Taylor	.....	.....	2	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Volusia	10	2	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	1	.....
Wakulla	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Walton	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....

Other cases reported: Paratyphoid, 0; Typhus, 0; Asiatic Cholera, 0; Bubonic Plague, 0; Yellow Fever, 0; Leprosy, 0; German Measles, 3; Chicken-pox, 60; Dengue, 1; Glanders, 0; Anthrax, 0; Rabies, 0; Tetanus, 0; Favus, 0; Beriberi, 0; Cancer, 4; Epidemic

NUMBER OF CASES AND DEATHS REPORTED FOR JANUARY, FEBRUARY AND MARCH

Influenza		Dysentery		Mumps		Pellagra		Tuberculosis		Syphilis		Gonococcus Infection		Hookworm	
Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1,546	684	12	24	246	1	5	30	155	273	499	23	456	.....	665	.....
179	17	.....	.....	.....	.....	1	1	3	11	8	1	6	.....	158	.....
.....	7	.....	1	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....
204	6	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
.....	14	.....	1	.....	.....	.....	.....	2	1	17	1	.....	.....	1	.....
5	8	.....	1	.....	.....	.....	.....	1	1	.....	.....	2	.....	57	.....
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....	.....	.....	.....	.....
.....	8	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
22	1	.....	.....	3	.....	.....	.....	4	2	3	.....	3	.....	252	.....
9	1	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....
.....	19	.....	.....	.....	.....	.....	.....	1	1	1	.....	2	.....	.....	.....
72	13	.....	.....	3	.....	.....	1	14	13	55	.....	42	.....	1	.....
9	11	.....	3	.....	.....	.....	1	2	6	7	.....	12	.....	1	.....
609	60	1	1	162	.....	3	3	58	43	250	9	246	.....	6	.....
29	51	3	1	4	.....	.....	.....	5	9	12	.....	25	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	1	1	3	1	3	.....	.....	.....
51	16	3	3	41	1	1	3	3	13	27	4	3	.....	.....	.....
4	.....	.....	.....	.....	.....	.....	.....	1	4	.....	.....	.....	.....	.....	.....
.....	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	38	.....
50	79	1	4	1	.....	.....	6	29	45	73	1	76	.....	5	.....
3	17	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	26	.....	.....	.....	.....	.....	.....	1	2	1	.....	.....	.....	.....	.....
.....	30	.....	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
1	9	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....
17	4	.....	.....	.....	.....	.....	1	2	7	.....	.....	2	.....	2	.....
.....	7	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	.....
86	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4	.....
.....	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	3	.....
.....	3	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
.....	28	.....	.....	2	.....	.....	1	1	3	4	.....	.....	.....	.....	.....
.....	6	.....	1	.....	.....	.....	1	.....	4	6	.....	2	.....	3	.....
23	21	.....	.....	4	.....	.....	1	1	9	2	.....	.....	.....	98	.....
.....	5	.....	1	1	.....	.....	.....	1	7	1	1	.....	.....	.....	.....
10	4	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	.....	.....
.....	6	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....
.....	10	.....	.....	.....	.....	.....	.....	5	12	.....	.....	1	.....	15	.....
.....	2	.....	1	2	.....	.....	.....	1	2	.....	.....	.....	.....	1	.....
.....	3	2	.....	1	.....	.....	.....	2	3	.....	.....	15	.....	.....	.....
26	4	.....	1	1	.....	.....	1	.....	5	2	.....	3	.....	3	.....
.....	22	.....	2	.....	.....	.....	.....	1	10	6	1	5	.....	1	.....
23	.....	.....	.....	.....	.....	.....	.....	5	11	5	.....	.....	.....	2	.....
1	5	.....	.....	.....	.....	.....	2	1	4	3	.....	2	.....	.....	.....
6	5	.....	.....	.....	.....	.....	.....	.....	4	.....	1	.....	.....	.....	.....
13	7	.....	.....	2	.....	.....	.....	2	.....	.....	.....	.....	.....	2	.....
.....	14	.....	.....	2	.....	.....	1	.....	1	1	1	.....	.....	.....	.....
12	.....	1	.....	.....	.....	.....	2	2	.....	1	.....	.....	.....	.....	.....
.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	27	.....	.....	.....	.....	.....	.....	1	8	.....	.....	.....	.....	1	.....
2	6	.....	1	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1	.....
105	6	1	.....	2	.....	.....	1	.....	8	2	1	.....	.....	1	.....
.....	15	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	7	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....
4	7	.....	.....	13	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....

Meningitis, 9; Acute Poliomyelitis, 1; Trachoma, 88; Ophthalmia Neonatorum, 3; Pneumonia, 126; Trichinosis, 0.

Sanitary Engineering Notes

BY GEORGE W. SIMONS, JR., *Chief Sanitary Engineer*

MOSQUITO CONTROL ACTIVITIES

During the period of war the officials of the Army and the United States Public Health Service, recognizing the value of protection against malaria brought into prominence and to public attention the effectiveness and significance of detailed mosquito control or anti-malarial measure. These organizations conducted the work primarily as a war measure for the protection of soldiers in cantonments and ship builders but simultaneously it was also effective in adjacent civil communities. In addition to the excellent work done by the above Federal organizations the International Health Board inaugurated and completed a comprehensive and worthy bit of anti-malarial work in one Arkansas county. The small amount of work already done and its ultimate effect upon all communities is arousing great interest among our citizens in Florida.

Wherever mosquito control work has been done the malaria incidence has fallen rapidly. A study of statistics will show this point. In Hamburg, Arkansas, for instance, a total of 2,312 malaria calls during 1916 was reduced to 260 calls in 1917, subsequent to mosquito control work. The work done at Hamburg cost \$1.45 per capita and resulted in a 62.25 per cent. reduction in malaria incidence. This work was accomplished by ditching, draining and oiling.

At Sheffield, Alabama, the United States Public Health Service conducted work in vicinity of the nitrate plants which, according to local physicians, reduced malaria incidence about 90 per cent. This work cost approximately \$1,200 per square mile.

The number of mosquito control surveys which have been concluded clearly indicate that the problem presented by most any community is capable of a solution. It is quite true that the expense incident to the control work in some communities would be exorbitant, however, in a majority of the cases cost of work would be greatly offset by the resulting comforts, conveniences and freedom from malaria.

Mosquito control work can be handled in several ways. Metz, in a recent publication, classifies the means of control under three headings: Drainage, Oiling and Accessory Measures.

The first of these, drainage, offers the best possible control. If no water is present no mosquito larvae can develop and consequently the nuisance is finally eliminated. Numerous low spots exist all over the State of Florida; possibly the reader can recall a few that can be easily and effectively drained for the expenditure of a small amount of money with a minimum of work. One place

comes to mind, that of a small cypress swamp which during dry weather is practically free of water but during rainy periods becomes filled, breeding millions of mosquitoes—enough to supply the community for a radius of a mile. A small ditch cut through a nearby roadway would drain this troublesome area and eliminate the mosquitoes. All clogged ditches and culverts act as mosquito breeding reservoirs. Those can be easily cleaned and freed of mosquitoes. Drainage is the most effective measure of all.

Pools or ponds incapable of draining can best be oiled regularly. The anopheles mosquito seldom develops in less than eight to twelve days, therefore oiling once per week would suffice. Oiling should be done by means of a spray or any other approved method. Kerosene is a good oil but evaporates too rapidly; it is usually mixed with fuel or black oil in parts of about 1 to 3 or 4. Metz refers to a new way of spreading oil by casting oil-soaked sawdust on the surface of the water.

Under accessory measures can be placed fish control. Fortunately in Florida the waters are stocked with a small surface feeding minnow. This minnow can be found in the most remote and smallest ditches—it is everywhere. Technically it is known as "*Gambusia Affinis*." The United States Fish Commissioner recently favored the writer with considerable information relative to this small fish and the conclusions he offered were:

1. "*Gambusia Affinis* is especially suitable for anti-mosquito work because:

- (a) It seeks its food at the surface.
- (b) It is very prolific.
- (c) It gives birth to well developed young, therefore requiring no special environment for depositing and hatch-eggs.
- (d) It lives and thrives under a large variety of conditions and frequents areas especially suitable for the support of mosquito larvae.
- (e) It usually lives and multiplies in ponds stocked with predaceous fishes, providing it has very shallow water for refuge.

2. Plants which have slightly emerged leaves and stems on which form floating mosses are the chief sources of protection of mosquito larvae against the top minnow. Such plants should be removed from the water.

3. "*Gambusia Affinis*" is of great value in anti-mosquito work. It eliminates the wriggler completely from ponds which are fairly free of protective vegetation and debris."

Dynamite was used to a great extent in anti-mosquito work by the United States Public Health Service at both Camp Johnston, Florida, and Camp Wheeler, Georgia. At the latter place 4,151 cubic yards of ditch was excavated with dynamite for the sum of \$0.39 per cubic yard. The same work by hand and shovel would have cost approximately \$0.45 per cubic yard.

Several communities in Florida are now arousing public sen-

timent and enthusiasm in favor of anti-mosquito work. Recently the State Board of Health has rendered assistance and given preliminary aid at Graceville, in Jackson County, Pensacola, in Escambia County; Chipley, in Washington County; Cocoa and Merritts Island, in Brevard County; Fernandina, in Nassau County, and Winter Park and Maitland, in Orange County. At all these places work will ultimately be under way in earnest to eliminate mosquitoes. The Bureau of Engineering of the State Board of Health is strongly urging this work and is lending every assistance possible to its successful realization.

WATER SUPPLY AND SEWERAGE IMPROVEMENTS

Following an exhaustive study of the Fort Pierce water supply quality a report was submitted to the city council containing certain definite recommendations. The council have proceeded to take such steps as are advisable for the improvement of the city water—the removal of iron, manganese and sulphur gas.

The Miami water situation is being studied by the Bureau. The excessive salt content in Miami water means a new supply ultimately—one free from salt.

It is gratifying to note that West Palm Beach will have installed shortly a modern filtration plant for clear lake water. This will give the Palm Beach city one of the best supplies in the State.

Melbourne is progressive. Interest is being aroused in municipal water and sewerage systems.

Leesburg has recently submitted plans for a new sanitary sewerage system.

The State Board of Health contemplates to soon actively co-operate with the city of Miami in conducting a sewage disposal experimental station.

THE SCHOOL PRIVY

The school year will soon close and then the time will be at hand to execute some of the contemplated plans that have been needed for a long time. The time is then opportune to take a long stride forward and get the school privies reconstructed and re-modeled in accordance with modern ideas.

The first essential in school sanitation where running water and sewerage are not available is provision for a privy for each sex. Poorly constructed and improperly maintained privies are not only a menace to the health of the pupil by increasing the danger of infection, but they encourage the formation of irregular habits that are disastrous to the child's health.

It is a most dangerous error to suppose that the functions of elimination can be postponed or neglected with impunity. Chronic constipation is a frequent result of such neglect, and many of the ailments that occur later in life are due directly to these conditions. Therefore the school toilets must be maintained in a clean

and sanitary condition to encourage their use. This is a very important subject and has a direct bearing upon the life and future health of the pupils.

Children who attend schools that are provided with sanitary toilets also acquire an excellent idea of sanitation which is of great value to them throughout life. It is in this formative period of the child's life when the foundation for future health is laid by the formation of regular habits. What better inducements for acquiring such regular habits of cleanliness can the school offer than properly constructed and maintained toilets that can be used without discomfort.

IMPORTANT INFORMATION

The laws of the State of Florida require that every school be provided with at least two sanitary privies.

Laws alone will not, however, solve the problem of securing better school outbuilding and keeping them in a cleanly condition. The problem demands for its solution a right attitude by the pupils themselves, guided therein by the teachers, and supported whole-heartedly by school boards and parents. In the last analysis the sanitary care of the school toilets devolves upon the teacher. As a part of the school discipline pupils should be compelled to use outbuildings properly, and taught to take pride in maintaining them in a cleanly condition. A filthy outbuilding does not enhance the reputation of an otherwise clean and wholesome environment.

Such infections as typhoid fever and dysentery, are often increased by the spreading of human excreta through some of the following methods:

By water, through surface subsoil seepage.

By dirty hands and dirty clothing.

By flies and other insects.

By dirt carried indoors by the feet of man and animals.

Thus the proper disposal of human wastes is absolutely necessary for safeguarding the public health.

In districts where sewers are not available, where private sewage disposal systems are not practicable, or where the water supply is derived largely from shallow surface wells, the sanitary privy is absolutely essential for the safe disposal of human waste.

REQUIREMENTS FOR RURAL SCHOOL PRIVIES

School buildings should have as a minimum requirement the following equipment:

One privy seat for every twenty females or fraction, except for grammar and primary grades, where there shall be one privy seat for every fifteen females or fraction.

One privy seat and one urinal space for every forty males or fraction except for grammar and primary grades, where there should be one privy seat and one urinal space for every thirty males or fraction.

OTHER SANITARY PRIVY ESSENTIALS

The essentials of a sanitary privy are:

Proper design and location with respect to water supply, privacy and convenience.

Adequate capacity and proper construction.

Proper light and ventilation.

Proper use and upkeep.

Proper final disposal of contents.

A privy which is temporarily designed, located, constructed and maintained may be the means of transmitting disease.

It should NOT be located near a well into which the liquids from the vault may pass, either over the surface of the ground or through the ground. A porous soil or a fissured rock layer may allow the privy drainage to flow quickly into the soil.

The privy should be tightly constructed, preventing flies, chickens, dogs, hogs, etc., having access to the contents. These agencies disseminate the germs found in excreta and expose human beings to infection.

One of the greatest dangers is from flies. After walking over the excreta they carry filth in small quantities on their feet and bodies and leave it in minute portions wherever they may light. One fly is thus capable of infecting food. So frequently does this happen that the fly is not infrequently styled the "typhoid fly," and is, at times, responsible for much of the spread of typhoid fever. Remember that the fly speck is nothing more than droppings from the fly.

Hookworm Infection -- Bureau of Laboratories

During the past few months the State Board of Health has conducted examinations in various counties in the State that show very plainly that there is great need for co-operation on the part of the people to get rid of hookworm infection. There are a few points that are quite plainly evident: (1). Although the examinations have been open for all, the specimens have been submitted chiefly from school children. (2): Pupils in the higher grades apparently feel that they do not need the examinations. (3). Although the percentage of positives has been higher among the younger children as a whole there has been all too high a percentage among the older ones to feel that real headway can be made except by examination of *all*. (4). When infection has been found in a family many times *all* members of the family have been found infected. (5). The hookworm problem is not a local, but a state-wide problem of the greatest importance.

Below are the results of examinations conducted by the Central Laboratory giving the number of examinations by counties during intensive work but not including those sent in to the laboratory at other times.

A word of explanation should be given in regard to the examinations in Orange County. Owing to the fact that schools were not in regular session during the days of the fair, this being the time when the tests were made, there were but few specimens submitted. The counties are given in the order in which examinations were made:

	Specimens	% Hookworm Infection
Brevard	575	19.3
Orange	33	45.5
Marion	542	18.
Alachua	1,133	22.2
Columbia	328	37.2
Citrus	454	32.4
	<hr/> 3,065	<hr/> 24.7

Aside from the hookworm infections there were ninety cases of infection with other intestinal parasites.

Now what is the lesson to be learned from the facts set forth above? If we simply make the diagnosis and rest there we have done but little nor have we done lasting good if all these individuals are treated and cured, for if the same conditions exist they will quickly become reinfected. It is only by diagnosis, treatment and removal of the possibility of reinfection that the desired end will be reached and here you will see that real co-operation is needed.

Did it ever occur to you that the individual with a light infection, in fact so light that no symptoms are present, might be the greatest menace to the community? This individual is just as capable of infecting others as the one with a heavy infection.

As this is the case you can readily see that when examinations are made in any locality they are not complete unless each individual is examined. There seems to be a feeling on the part of some—it has been very evident in the case of high school pupils—that it is a disgrace to have hookworms, but it is a perfectly natural condition for any individual brought up in the South and the only disgrace is to keep the infection when the chance is offered to be rid of it.

This is a big problem and means much to the State. Won't you help solve it?

BEWARE OF THE DANGEROUS HOUSE FLY AND EXTERMINATE THE MOSQUITO

We are now in the midst of the season when to "swat" one fly is to prevent the propagation of millions of its descendants during the summer and autumn, with all the attendant dangers.

We quote freely from a leaflet recently published by the Merchants' Association of New York, which has quite as much application to military as to civil life:

The fly has no equal as a germ "carrier"; as many as five hundred million germs have been found in and on the body of a single fly.

It is definitely known that the fly is the "carrier" of the germs of typhoid fever; it is widely believed that it is also the "carrier" of other diseases.

The very presence of a fly is a signal and notification that a housekeeper is uncleanly and inefficient.

Do not wait until the insects begin to pester; anticipate the annoyance.

May and June are the best months to conduct an anti-fly campaign.

The farming and suburban districts provide ideal breeding places, and the new-born flies do not remain at their birthplace but migrate, using railroads and other means of transportation, to towns and cities.

Your friends and members of the family now in the service should be reminded of the danger of the house fly in camps and cooperate with their superiors for the elimination of this deadly pest.

Kill flies and save lives!

T. B., M. D., N. G.

A weak, sentimental M. D.

Had a patient with early T. B.

He called it a "cold"

And the lie that he told

Catalogued this M. D. as N. G.

Let's clean up!

The season's greatest dangers:

The left-over flies.

The closed windows.

The spring blood purifiers.

The calendar change of clothes.

The accumulated winter rubbish.

The "spring fever," or the "putting it off" habit.

Man is mostly the sum of his memories—*Estey*.

Springtime—the time of the hoe and rake—"the happiest time of the year"!

A fixed principle is like a star—the darker the night the brighter it shines.

Do you feel the thrill of these spring days? If not, you need to see your doctor.—*Kansas State Board Health*.

RULES AND REGULATIONS OF THE FLORIDA STATE BOARD OF HEALTH, GOVERNING MORBIDITY REPORTS

Sec. 1.—It being the duty of the State Board of Health to keep currently informed of the occurrence, geographic distribution and prevalence of the preventable diseases throughout the State, and to prevent the spread of these diseases, and for that purpose the following Rules are adopted in accordance with power conferred on the State Board of Health, as provided by Chapter 6892 (No. 86), Laws of 1915.

Sec. 2.—The following named diseases and disabilities are hereby declared to be dangerous to the public health and made notifiable, and the occurrence of cases shall be reported as herein provided:

GROUP 1—COMMUNICABLE DISEASES

Anthrax	Mumps
Chancroid	Ophthalmia Neonatorum (conjunctivitis of new-born infants).
Chicken-pox	Paratyphoid Fever
Cholera, Asiatic (also cholera nostras when Asiatic Cholera is present or its importation threatened).	Plague
Dengue	Pneumonia (Acute)
Diphtheria	Poliomyelitis (Acute Infectious)
Dysentery:	Rabies
(a) Amoebic	Scarlet Fever
(b) Bacillary	Smallpox
Favus	Syphilis
German Measles	Tetanus
Glanders	Trachoma
Gonococcus	Trichinosis
Hookworm Disease	Tuberculosis (all forms, the organ or part affected in each case to be stated)
Influenza	Typhoid Fever
Leprosy	Typhus Fever
Malaria	Whooping Cough
Measles	Yellow Fever
Meningitis:	
(a) Epidemic Cerebrospinal	
(b) Tuberculous	

GROUP 2—MISCELLANEOUS DISEASES

Beriberi	Cancer	Pellagra
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Provided, That the State Board of Health may from time to time, in its discretion, declare additional diseases notifiable and subject to the provisions of these Rules and Regulations.

“Just be Glad”



“Just be glad—this is the new order, the new life and the new time. It is the golden gospel of human sunshine. There is more to live for than you ever imagined. Thus far most of us have only touched the merest surface of human existence; we are only on the verge of the splendor of life as it is; we are standing on the outside, so to speak, of the real mansions of mind and soul; and one reason is, we live too much in the limitations of our disappointments. The great soul is always in search of ways and means of adding to the welfare of others. But no way is better, greater or more far-reaching than this—just be glad.”